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Z	Molecular Fingerprint-Derived Similarity Measures for Toxicological Read-Across:
3	<b>Recommendations for Optimal Use</b>
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#### 17 ABSTRACT

Computational approaches are increasingly used to predict toxicity, in part due to pressures to 18 19 find alternatives to animal testing. Read-across is the "new paradigm" which aims to predict toxicity by identifying similar, data rich, source compounds. This assumes that similar 20 molecules tend to exhibit similar activities, i.e. molecular similarity is integral to read-across. 21 22 Various molecular fingerprints and similarity measures may be used to calculate molecular 23 similarity. This study investigated the value and concordance of the Tanimoto similarity values 24 calculated using six widely used fingerprints within six toxicological datasets. There was 25 considerable variability in the similarity values calculated from the various molecular fingerprints for diverse compounds, although they were reasonably concordant for homologous 26 series acting via a common mechanism. The results suggest generic fingerprint-derived 27 similarities are likely to be optimally predictive for local datasets, i.e. following sub-28 categorisation. Thus, for read-across, generic fingerprint-derived similarities are likely to be 29 30 most predictive after chemicals are placed into categories (or groups), then similarity is calculated within those categories, rather than for a whole chemically diverse dataset. 31

32

33 **KEYWORDS:** Read-across; toxicity; molecular fingerprint; regulatory acceptance;

34 molecular similarity; Tanimoto coefficient; in silico

## 35 HIGHLIGHTS

37	-	Molecular fingerprints to identify read-across analogues have been evaluated
38	-	Identification of read-across analogues is dependent on the molecular fingerprint
39	-	Commonly used molecular fingerprints may not address the mechanism of toxic action
40	-	Commonly used molecular fingerprints are most likely to be predictive within a
41		homologous series
42	-	Similarity measures tailored to the endpoint are likely to be most useful
43		

#### 44 1. INTRODUCTION

The use of alternative approaches to assess chemical safety is growing due to legislation that 45 46 requires greater knowledge of the harmful effects of chemicals, whilst also requiring a reduction in, or avoidance of, animal testing. Alternative methods, including in vitro assays, -47 48 omics and computational approaches ((Quantitative) Structure-Activity Relationships 49 ((Q)SARs), read across etc.) have become integral to many hazard assessment strategies. Of 50 these, computational or (Q)SAR (in silico) approaches aim to predict the toxicity of compounds from descriptors of chemical structure and thus reduce testing. In particular, read-across is at 51 52 the forefront of the prediction of toxicity and has been seen as the "new paradigm" for hazard assessment (Cronin et al, 2013; Berggren et al., 2015; Schultz et al, 2015; Schultz and Cronin 53 2017; Patlewicz et al 2018). Read-across relies on the ability to identify similar molecules with 54 the assumption that similar molecules will tend to exhibit similar activity or, at least, show 55 similar trends in activity (OECD, 2014). Although the concept of similarity has growing 56 57 acceptance for toxicity prediction, in reality there are still a number of barriers to acceptance of the predictions, especially for regulatory purposes (Bender and Glen, 2004; Spielmann et al., 58 2011; Teubner et al., 2015; Ball et al., 2016; Schultz and Cronin 2017; Chesnut et al 2018). Of 59 60 the barriers identified by Ball et al (2016), some are more trivial to address than others, e.g. full documentation and ensuring the correct chemical structure is provided. The most difficult 61 aspect of justifying a read-across argument is the assessment of "similarity" and being able to 62 provide evidence for such, so to build scientific confidence (Patlewicz et al., 2015; Schultz et 63 64 al 2018). For instance, there is a concern over effects such as activity cliffs, where structurally 65 similar compounds have a significant difference in potency (Guha and van Drie, 2008; Stumpfe and Bajorath, 2011; Cruz-Monteagudo et al., 2014). In addition, there is the on-going problem 66 of how to define similarity from a molecular level (Maggiora et al., 2014) as well as adequately 67 for read-across (OECD, 2014; Shah et al., 2016; Patlewicz et al 2018; Schultz et al 2018). It is 68

69 important to note that the similarity between any two objects may be calculated in a variety of 70 different ways and relies on a definable set of features (or descriptors), as well as a means of qualitatively or quantitatively defining similarity based upon those variables. Molecular 71 72 similarity is no different and whilst two molecules may appear highly similar in one aspect, for instance they may have the same molecular weight, they can be dissimilar in other aspects, 73 74 such as chemical structure. Thus, the means of defining similarity and providing a means to 75 calculate it is essential. This study has focused on molecular fingerprints due to their increased use in read-across through techniques such as machine learning (Luechtefeld et al., 2018). 76 77 However, in the context of the current work, the focus is upon read-across predictions made using pairwise comparison to one, or a few, suitably "similar" chemicals, as may well be the 78 79 case for practical applications. Some of the insights presented herein, regarding the strengths 80 and weaknesses of molecular fingerprint derived similarity measures, may also be applicable 81 in the context of these machine learning studies. Still, detailed examination of the pros and cons of the use of molecular similarity in the context of supervised machine learning, where 82 83 relationships may be found based on the similarity computed to multiple tested chemicals within a large database, is beyond the scope of the current paper. To assist the reader, 84 definitions are stated in Table 1 that are pertinent to this investigation. 85

#### 86 TABLE 1 HERE

The read-across approach may be broadly defined as one in which quantitative or qualitative predictions of an endpoint of interest are made for a target chemical using endpoint data for one or more sufficiently similar source chemicals (OECD, 2014). Usually, this approach is envisaged as only being suitable following grouping of related chemicals, e.g. to form a category (OECD, 2014). There are a number of means of identifying "similar" molecules for grouping and read-across which are deemed acceptable for regulatory purposes, including use

93 of common, mechanistically relevant, structural features and transformation to the same metabolite or degradant (OECD, 2014). There is also the more general concept of "chemical 94 similarity", i.e. using measures of similarity based on common structural features, 95 96 physicochemical or biological properties and / or calculated variables related to molecular structure (descriptors). This broader notion of "chemical similarity", in contrast to those which 97 are deemed acceptable for regulatory purposes, may be defined in terms of generic structural 98 99 features / properties / variables, which are not necessarily relevant to the endpoint of interest. 100 These approaches use chemometrics, the science of using mathematics and statistics to analyse 101 chemical data in order to obtain knowledge about chemical systems; elsewhere, the term cheminformatics or chemoinformatics may be used.) Chemometric measures of similarity are 102 widely used as they are rapid and cost effective due to the availability of online tools, e.g. 103 104 ChemMine Tools (chemminetools.ucr.edu/) and MuDRA (Alves, 2018), and software that can 105 be freely downloaded, e.g. Toxmatch (Patlewicz, 2008; 2017). Whilst the use of analogues and mechanistically relevant fragment based methods to identify similar molecules for read-across 106 is relatively well developed (Schultz et al., 2015), much less is known about the use of 107 "chemical similarity", as defined above, for read-across. This is an area that was founded in 108 109 the identification of new leads for drug development, thus the similarity measures were not necessarily intended for the purpose for which they are currently applied. For grouping and 110 read-across, where there is no rational measure to find similar compounds, or where a large, 111 112 diverse inventory is being searched, chemometric methods may seem appealing. However, there is no clear guidance on how they may be applied. 113

The generation of chemometric similarity requires the conversion of chemical structures into machine readable representations which are then compared using one of the many available similarity coefficients (Willett et al., 1998; Holliday et al., 2003). The calculated similarity can vary depending on the type of representation chosen and which similarity coefficient is used.

Most similarity calculations rely on the use of (molecular) fingerprints in order to generate 118 machine readable bit representations from chemical structure. Fingerprints are based mostly on 119 2D representations of a molecule and are used due to their computational efficiency (Holliday 120 et al., 2003). The process of generating bits from chemical structure is illustrated by Figure 1, 121 for a scenario in which the corresponding structural features are molecular substructures A 122 fingerprint is typically a binary vector, with bits set to 1 or 0 depending on the presence or 123 124 absence of a structural feature (e.g. molecular substructure) within the molecule of interest. In principle, there does not have to be a simple one-to-one correspondence between the presence 125 126 of a structural feature and the presence of a molecular substructure. For example, one of the features employed in the RDKit implementation of the MACCS fingerprint corresponds to 127 "two methyl groups" (https://github.com/rdkit/rdkit-128 or more 129 orig/blob/master/rdkit/Chem/MACCSkeys.py). Moreover, other fingerprints might encode the 130 occurrence count of structural features, rather than simply their presence or absence. However, if the fingerprint only encodes the presence or absence of certain fragments and not their 131 quantity, this may be a limitation (Flower, 1998). For this scenario, a molecule can contain a 132 specific fragment 1 or 100 times and the resulting bit string will be set the same, thus giving 133 little information with regards to, for instance, molecule size and which fragments occur more 134 often within a molecule (Flower, 1988). 135

#### 136 FIGURE 1 HERE

Many different types of molecular fingerprints are used to calculate the similarity between two molecules. Two of the most widely used are the molecular access system (MACCS) fingerprint and the extended connectivity fingerprint (ECFP). The MACCS fingerprint was one of the first developed and is amongst the most commonly used for similarity calculations. MACCS is a prototypic fingerprint, which typically contains 166 structural features, related to the presence and occurrence count of substructures comprising a variety of non-hydrogen ("heavy") atoms
(Maggiora et al., 2014), albeit this may be implementation dependent
(http://www.dalkescientific.com/writings/diary/archive/2014/10/17/maccs\_key\_44.html,

https://github.com/rdkit/rdkit-orig/blob/master/rdkit/Chem/MACCSkeys.py). The **ECFP** 145 defines molecular features by assigning identifiers to each of the heavy atoms in the molecule, 146 based upon atomic properties and bonding arrangements, and then combining those identifiers 147 with those assigned to neighbouring heavy atoms up to a specified number of bonds away 148 (Rogers and Hahn, 2010). The most commonly used ECFP fingerprint is ECFP4, which has a 149 150 bond diameter of four. ECFP4 comprises features derived from the compounds in the analysed dataset, which necessarily overlap, in contrast to the MACCS fingerprint, for which the features 151 are pre-defined (Maggiora et al., 2014). In simple terms, approaches such as ECFP are more 152 153 complex than MACCS, allowing for the generation of many different atom environments and 154 describe molecular structure more subtly. Finally, it should be noted that different variants of both fingerprints may be computed by different software programs (Rosenbaum et al., 2011; 155 http://www.dalkescientific.com/writings/diary/archive/2014/10/17/maccs key 44.html, 156

157 https://github.com/rdkit/rdkit-orig/blob/master/rdkit/Chem/MACCSkeys.py).

A coefficient is used to assess the similarity of two, or more, molecules as defined by the fingerprints. The similarity coefficient most frequently combined with the use of fingerprints is the Tanimoto coefficient (Tc). (Elsewhere, this may be termed the Jaccard similarity (Willett et al., 1998; Luechtefeld et al., 2018).) For molecules described in terms of bit-vector molecular fingerprints, Tc is computed as per equation (1), albeit a more general definition exists for continuous variables (Willett et al., 1998).

165 Tc (A, B) 
$$=\frac{c}{a+b-c}$$
 (1)

167 In equation (1), the Tanimoto coefficient (Tc) for the similarity of two objects (molecules) A and B is a function of the number of features present within compounds A and B (a and b 168 169 respectively), and the number of features shared by A and B (c). With regard to molecular fingerprints, a and b are the number of structural features, or bits set to 1, in each molecule, c 170 is the number in common. Therefore, Tc quantifies the fraction of features common to A and 171 B as a fraction of the total number of features of A or B, where the c term in the denominator 172 corrects for double counting of the features (Willett et al., 1998; Maggiora et al 2014). It is 173 obvious, therefore, that the Tc calculated is dependent on the type of fingerprint method applied. 174 Thus, should Tc be used for grouping or read-across within a group, the type of fingerprint 175 applied is vital. Also of relevance to read-across is the value of Tc that would constitute 176 molecules being considered to be sufficiently similar for read-across predictions of a given 177 endpoint to be made for a target compound based upon endpoint data for the similar source 178 compounds (OECD, 2014). There is no definitive rule or guidance for use of Tc or specific 179 180 fingerprints, in part due to the differences in calculated values. Within the drug design community, it is often considered that knowledge of the point at which the similarity of A and 181 B reaches a 'threshold' point, where they exhibit similar biological activity, is required. For 182 more than 15 years, a Tc value of 0.85 was widely considered this 'threshold' value for 183 bioactivity (Maggiora et al 2014). However, studies have since shown that this value is not 184 reliable, especially when different molecular representations are used (Eckert et al., 2007; 185 Stumpfe et al. 2011; Martin et al., 2002). Despite these issues, Tc is widely used as a measure 186 of molecular similarity as it is simple to calculate and is readily available in easy-to-use tools, 187 188 some of which are online and some of which are freely available to download (Whittle et al., 2004; Salim et et al., 2006; Rogers and Hahn, 2010; Todeschini et al., 2012; Reisen et al., 2013; 189 Willett, 2013; Bajusz et al., 2015, Cereto-Massague et al., 2015). 190

191 Whilst widely applied, a number of studies have shown that using Tc to calculate chemical similarity has its limitations and weaknesses (Dixon and Koehler, 1999; Flower, 1998; 192 Holliday et al., 2002; Laiiness, 1997). Godden et al (2000) demonstrated that Tc has a tendency 193 194 to produce a similarity score of about 0.3 even for structurally distant molecules. It has also been suggested that Tc calculations are biased towards smaller molecules when used for 195 selection according to diversity and that other coefficients may be more appropriate for some 196 197 data types (Dixon et al., 1999; Lajiness et al., 1997; Whittle et al., 2003). Moreover, as is perhaps most relevant for the purposes of toxicity prediction, Tc is a generic measure of 198 199 molecular similarity which treats the shared presence of mechanistically irrelevant substructures as equally important as the shared presence of mechanistically crucial 200 substructures, such as those corresponding to structural alerts (Alves et al., 2016). One way of 201 202 taking account of this is to compute a weighted Tanimoto index (Maunz et al., 2008). 203 Nonetheless, in spite of its known limitations, a Tanimoto similarity of 0.7 is elsewhere considered as a cut-off for read-across (Enoch et al 2009; Hartung, 2016). 204

The aim of this study was to determine the value of different molecular fingerprints to assess 205 molecular similarity, in terms of the Tanimoto coefficient, in the context of read-across. In 206 207 particular, the focus of the study was to examine scenarios in which these similarity values might be useful for read-across based upon pairwise comparison to one or a few chemicals, 208 with measured endpoint data, for the purpose of toxicological data gap filling. Specific 209 objectives were to assess the performance and reliability of different molecular fingerprints 210 211 used in similarity analysis, with a view to determine when similarity computed in this fashion 212 works well and does not work well, as well as to consider how molecular similarity can be placed into a mechanistic framework to predict toxicity taking in account molecular initiating 213 214 events (MIEs) (Allen et al., 2016, Cronin et al., 2017; Cronin and Richarz, 2017). It should also be made clear that the purpose of this study was not to conclusively establish an optimum 215

216 method for predicting toxicity. Rather, the purpose of this study was to gain a better 217 understanding of chemical similarity, calculated in terms of the widely used Tanimoto 218 coefficient and generic chemical fingerprints, its strengths, weaknesses and how best to make 219 use of it for read-across based upon pairwise comparisons to one, or a few, chemical(s).

220 To achieve the objectives of this study, six datasets were analysed and these are summarised 221 in Table 2. The datasets were small in size (from 7 to 211 compounds) compared to more 222 complex inventories, e.g. of REACH chemicals, or databases that may be investigated for drug discovery. The selection of the datasets was influenced by a number of factors. Datasets were 223 224 chosen which had been the subject of previous read-across or QSAR analyses, or potentially could be used as such. These were datasets that the authors were familiar with, hence allowing 225 for an understanding of the selection process for compounds as well as the quality of the 226 underlying biological data. They were also chosen to represent a range of mechanisms and 227 molecular initiating events which may influence the use of molecular similarity. 228

229

#### 230 **2. METHODS**

#### 231 **2.1 Data Sets Analysed**

In total six different datasets were chosen to calculate Tc in this study. These datasets were chosen as they provided different read-across scenarios, thus allowing similarity calculations based on different fingerprints to be assessed for reliability/ accuracy. The six data sets (Table 2) chosen were analysed and a Tanimoto score for each pair of chemicals within each data set was calculated for the different fingerprints.

## 237 TABLE 2 HERE

238

## 239 **2.2 Calculation of molecular fingerprints**

240 Molecular fingerprints and Tanimoto similarities were calculated using the freely available 241 **KNIME** software (version 3.3.0). Α **KNIME** workflow (http://dx.doi.org/10.5281/zenodo.1401196) was developed that applied the CDK Fingerprints 242 node to calculate 2D fingerprints and then to calculate different Tanimoto similarities, in terms 243 of these fingerprints, between the molecules in a dataset provided as an SDF file. Tanimoto 244 similarities (Tc) in terms of these bit-vector fingerprints were calculated as per equation (1). 245 The CDK fingerprints calculated were the CDK Standard, CDK Extended, CDK PubChem, 246 CDK FCFP6, CDK ECFP4 and the CDK MACCS fingerprints. 247

248

#### 249 **2.3 Analysis of Tanimoto coefficients.**

The performance of the six different fingerprints to calculate Tc was analysed via the 250 visualisation of the similarity matrices. This was performed by adding the following 251 conditional formatting rules to cells within a Microsoft Excel spreadsheet: green (values 252 between 0.75 and 1), yellow (values between 0.5 and 0.749), orange (values between 0.3 and 253 0.499) and red (values between 0 and 0.299). Whilst arbitrary, these conditions led to the colour 254 green representing "highly similar" chemicals and red representing "highly dissimilar" 255 chemicals. The ranges of Tc scores were subsequently calculated to determine if knowledge 256 could be gained about which fingerprint works best for the different datasets. 257

258

#### 259 **3. RESULTS**

The KNIME workflow produced a CSV file which contained calculated Tc values for the input 260 data sets. The Tc data matrices for the datasets are provided in the supplementary information. 261 Figures (2-6) show the visualisation of the calculated Tc similarity matrices for five different 262 datasets (perfluorinated acids, alkylphenols, saturated alcohols, unsaturated alcohols and the 263 non-polar narcotic datasets), full details of which can been found within the supplementary 264 information along with the matrices for the LLNA skin sensitisation dataset. (The size of the 265 266 LLNA dataset meant that it was not possible to produce an informative image of the similarity matrices.) In each of these figures, the Tc scores for the same dataset using the six different 267 268 fingerprints are shown, where A was calculated using CDK Standard fingerprints, B was calculated using CDK MACCS fingerprints, C was calculated using CDK Extended 269 fingerprints, **D** was calculated using CDK PubChem fingerprints, **E** was calculated using CDK 270 271 FCFP6 fingerprints and F was calculated using CDK ECFP4 fingerprints. Each figure shows pairwise Tc values for all compounds in the dataset, with the similarity between compound i 272 and j being shown in the matrix element of row i and column j of the matrix, such that the Tc 273 values for the same compound compared to itself (Tc=1.0) lie along the diagonal elements. 274 N.B. (1) Each row (column) in these images is labelled by the name of the chemical for which 275 colour coded similarity values are reported within that row (column). (2) These images are 276 designed to illustrate the variation in pairwise similarity for the same pairs of compounds using 277 278 different fingerprints in terms of the corresponding colour patterns. The size of some datasets 279 necessarily makes it hard to read the individual pairwise similarity values from these images. Hence, all pairwise similarity values are provided in an Excel workbook in the Supporting 280 Information. In addition, Tables 3 - 5 show the range of Tanimoto similarity values that can 281 282 be obtained for the same pairwise comparisons, between compounds in selected datasets, using the different fingerprints. 283

### **FIGURES 2-6 HERE**

#### 285 **TABLES 3-5 HERE**

286

#### 287 4. DISCUSSION

Chemical similarity is, in theory, a beguiling concept allowing for the identification of similar 288 289 molecules to those with existing information, whether it be biological activity (such as pharmacological or toxicological effects), biokinetics, environmental fate or physico-chemical 290 properties. The science of molecular similarity is founded in drug discovery, where the aim 291 was to identify similar molecules to a known active compound. It mostly utilises easily 292 calculable parameters (descriptors), or fingerprint representations, of molecular structure. The 293 294 application of molecular similarity is typically based around the Tanimoto coefficient computed from bit-vector fingerprints, as per the current work. As such, there has been a strong 295 296 interest in this approach in drug discovery for many years and there has been a recent growth 297 of interest in the field of toxicology to enable data gap filling. With regard to toxicity prediction, the focus of the application of molecular similarity has shifted from being intended to identify 298 299 molecules highly similar to a known active (assuming a receptor mediated pharmacological effect) to multiple uses ranging from searching for any "similar" molecules to a target query 300 with unknown activity, to serving as the input to grouping and/or read-across approaches (Gini 301 302 et al., 2014; Luechtefeld et al., 2016a-d; 2018). As use of these approaches grows, it is clear that issues may arise with analogues being identified of little relevance, or important analogues 303 not being identified as the similarity measures are not appropriate. The purpose of this study, 304 305 therefore, was to assess the use of some commonly applied measures of similarity to investigate their use and provide a means of making recommendations for their use for techniques such as 306 read-across, with a focus on read-across predictions made using pairwise similarity calculations 307 308 to one, or a few, chemical(s), rather than, say, supervised machine learning approaches using

large quantities of data. To this end, six datasets were analysed which have previously been
subject to some form of read-across or QSAR approaches. All have well defined endpoints
with varying levels of confidence in the mechanistic rationale.

A number of different molecular fingerprints were calculated to determine the advantages or 312 313 disadvantages of a single method. The similarity matrices in Figures 2-6 clearly demonstrate a 314 difference in Tc scores calculated for the same dataset when using different fingerprints. Closer 315 examination of the perfluorinated acids dataset (Figure 2, dataset 3 from Table 2) indicates a 316 concordance in the fingerprints with regard to in their Tc values as all data matrices are green 317 (values of between 0.75 and 1), showing chemicals are "highly similar". For this data set, the Tc similarity matrices showed good concordance regardless of which fingerprint was chosen 318 i.e. the Tc based assessment of all chemicals as highly similar is in keeping with the assessment 319 which would be made by toxicological experts - since this dataset comprises a homologous 320 series, i.e. the same functional group with varying chain length, expected to act via a common 321 322 mechanism. As would be expected, variations in Tc scores were as a result of differences in carbon chain length. Those chemicals with C6-C8 gave similarity scores of 1 when compared 323 with each other, those chemicals with C10-C12 gave similarity scores of 1 when compared 324 325 with each other and the chemical with C9 tended to only show a similarity score of 1 when compared against itself (for CDK standard, CDK Extended fingerprints) or those with C10-326 C12 (for the other fingerprints). Naturally, all fingerprints gave a Tc value of one for 327 comparisons of the same compound to itself. This trend was similar for all fingerprints applied 328 to this dataset. Thus, fingerprint similarity, in terms of Tc, is a reasonable measure when 329 330 applied to homologous, or highly similar, series of chemicals, regardless of the fingerprint chosen With regard to read-across, this would indicate that it may be appropriate for "fine-331 tuning" a read-across within such a preselected series of chemicals - the process sometimes 332 333 referred to as sub-categorisation.

334 Analysis of datasets with greater structural variability (cf. Figures 3 - 6) indicates a much higher variability in the calculated Tc values depending on which fingerprint was chosen, with limited 335 concordance between them. For example, compare the Tc results for the alkylphenol dataset 336 337 calculated with CDK FCFP6 against those calculated using the CDK PubChem fingerprints. For two chemicals, 3-methyl-6-n-butylphenol and 2,6-di-tert-butylphenol, CDK FCFP6 338 fingerprints gave a Tc score of 0.26, whereas CDK PubChem fingerprints gave a Tc score of 339 340 0.88. For both the alkylphenols (Figure 3) and saturated alcohols (Figure 4) datasets, the Tc value computed from the CDK Standard, CDK MACCS, CDK Extended and, for Figure 4, 341 342 CDK PubChem fingerprints showed some concordance, with a similar pattern of colours denoting the degree of similarity as indicated by the Tc values. However, for both these datasets 343 the calculated Tc values for CDK FCFP6 and the CDK ECFP4 fingerprints were significantly 344 345 different to the Tc values from the other four fingerprints, with the CDK ECFP4 giving many 346 values that would suggest "highly dissimilar" chemicals, which is not the case for these datasets (based upon expert judgement). Similar discrepancies between fingerprints were seen for the 347 non-polar narcosis dataset (Figure 6). The reasons for such discrepancies undoubtedly reflect 348 the method of fingerprint calculation having an enormous impact on the identification of 349 350 analogues from large structurally heterogeneous datasets. It may even be an indicator for consideration of composite Tc scores to capitalise on the different information contained. 351 352 However, that would not address the possibility that toxicologically irrelevant structural 353 variation is being reflected in these similarity values and that relevant structural variation may not be being appropriately captured, even when the information from all fingerprints was 354 combined. Overall, care must be applied in using Tc values for structurally heterogeneous 355 356 datasets. To make optimal use of Tc values, the user should arguably decide carefully, and rationally, on which fingerprint to use, requiring the user to first give some thought to the 357 358 fingerprints and mechanism of the endpoint to be read across.

359 For the unsaturated alcohols dataset (Figure 5), all the calculated Tc similarity matrices were noticeably different for each of the six fingerprints used. This dataset consist of chemicals 360 which are, on the face of it, structurally similar but with subtle changes and differences not 361 only in chain length but also the position of the hydroxyl group, (primary or secondary alcohol), 362 branching, and position (internal or external) of the double bond. The positioning of the alcohol 363 group and double bond, as well as branching, will impact of toxicity (Schultz et al., 2017), 364 however none of the Tc values assisted in identifying rational, mechanistically similar 365 analogues across the group. Therefore, subtle, mechanistically relevant changes in molecular 366 367 structure, such as branching and positional effects may not be captured by any of the fingerprints considered here. Moreover, these most relevant changes will be treated as equally 368 important to whether irrelevant molecular substructures are shared or not between two 369 370 molecules.

Using molecular similarity to assist in toxicity prediction is unlikely to be perfect. There are 371 372 many examples of highly similar chemicals, in terms of Tc value, having very different toxicity profiles. For example, Table 5 lists four pairs of compounds, selected from the LLNA skin 373 sensitisation dataset, showing potential issues with activity cliffs, despite high Tc values from 374 some fingerprints. Comparison of 1,4-dihydroxyquinone, a strong skin sensitiser, with 375 resorcinol (1,3-dihydroxyquinone), a non-sensitiser, indicates both chemicals being highly 376 similar in structure with the only difference being the position of the hydroxyl groups on the 377 phenol ring (Table 5). The position of the hydroxyl groups in 1,4-dihydroxyquinone enables 378 this chemical to readily form benzoquinone, a reactive metabolite, whereas resorcinol does not 379 380 form this metabolite, leading to the difference in toxicity seen in regards to skin sensitisation (Bajot et al., 2011, Enoch et al., 2011). However, the Tc scores for most fingerprints in Table 5 381 indicate high similarity, which could lead to false assumptions with regard to grouping and 382 read-across, unless the mechanism of action is known. The wide range of Tc scores calculated 383

384 also shows the variability of the Tc scores dependent upon the choice of fingerprint. This emphasises the importance of choosing the most appropriate fingerprint, if any, for similarity 385 calculations. In the second comparison 3-phenylenediamine, a strong skin sensitiser, is 386 387 compared against aniline, a weak skin sensitiser. These chemicals are highly similar in structure, with the main difference being the presence of an extra amine group (Table 5). It has been 388 demonstrated that the presence of the 2 amine groups in 3-phenylenediamine makes this 389 chemical more reactive and leads to its ability to induce strong skin sensitisation (Bajot et al., 390 2011, Enoch et al., 2011). The Tc scores for this comparison again show variability dependent 391 392 upon fingerprint choice, with the majority of fingerprints giving a highly Tc score that could be interpreted as indicating these chemicals should have highly similar sensitizing activity. 393 394 Clearly, this would be an incorrect conclusion.

The final two comparisons compare 3,4-dihydrocoumarin, a moderate skin sensitiser, against 395 coumarin and 6-methylcoumarin which are both non-sensitisers (Table 5). These chemicals are 396 397 all structurally similar with the main difference being the presence of a methyl group and the presence of a double bond (Table 5). The presence of a double bond in the second ring of 398 coumarin causes it to be readily metabolised via Michael addition, into a non-sensitising 399 400 metabolite (Table 5). The absence of the double bond makes 3,4-dihydrocoumarin more reactive, which accounts for its moderate skin sensitisation when compared to the other two 401 chemicals. The Tc scores calculated for these two comparisons again show variability 402 dependent on fingerprint choice (Table 5). Two of the six fingerprints (CDK MACCS and CDK 403 PubChem) resulted in high Tc scores; this would suggest these chemicals exhibit similar 404 405 endpoint values, which would be invalid with regards to skin sensitisation.

One means of addressing the problems with fingerprint based Tc values calculated for non-homologous datasets, for which subtle changes in molecular structure may lead to significant

408 changes in toxicity for certain endpoints, would be to investigate similarity values calculated using a limited number of mechanistically relevant descriptors chosen based on expert 409 judgement. For example, in the case of skin sensitization, the electrophilicity index could be 410 used (Enoch et al., 2008). Similarities might be computed based upon the more general 411 expression for the Tanimoto coefficient, for continuous variables (Willett et al., 1998), 412 following normalisation of different descriptors to the same scale. However, even under this 413 scenario, it is possible that grouping of the chemicals, to ensure that they acted via a common 414 MIE, would first be required before similarity coefficients could be computed for read-across 415 416 (Enoch et al., 2008).

The visualisation and practical handling of Tc values should be borne in mind. In this 417 investigation, due to the number of chemicals in the LLNA skin sensitisation (211 chemicals) 418 and the non-polar narcotic (87 chemicals) datasets (Figure 6 and supplementary data), both of 419 which are quite modest in size, visualisation was challenging which makes the analysis of 420 421 results difficult. This is an issue that needs to be addressed to ensure that Tc similarity matrices can be used to their full potential. One approach could be to recognise the need to form 422 categories from larger datasets before Tc calculation, thus reducing the number of chemicals 423 424 within each matrix and making visualisation easier. One means of achieving this is that any relevant knowledge of MIEs should be used to pre-categorise the datasets prior to calculating 425 Tc values. For example, Tc values might be computed for chemicals acting via a common MIE, 426 as indicated by a shared structural alert, and for which some other expert based rules reduced 427 428 mechanistically irrelevant structural variation that would reduce the information conveyed by 429 the Tc values. This is likely to be the case if the chemicals could be assigned to a homologous series acting via a common mechanism, where the structural variation in chain length was 430 431 known to be biologically relevant.

432 In addition, in this study, arbitrary values were applied to visualise the data matrices. The range of 0.75 and 1 was chosen to highlight Tc scores green and show "highly similar" chemicals. It 433 must be remembered that issue of which Tc score is the cut off point for "highly similar", 434 435 assuming a simple approach based upon saying pairs of "highly similar" chemicals would tend to exhibit "highly similar" biological activity, is not well defined. It is clear from this study that 436 it is very difficult to include a universal "cut-off" and a variable approach to similarity levels 437 438 is preferable. This further assumes that such a simple approach to predicting similar toxicity, based upon any cut-off value using a fingerprint derived similarity calculation, is appropriate. 439 440 If suitable cut-off values can be identified at all, the exact values will depend on the fingerprint method applied, endpoint analysed and types of chemical and dataset (Enoch et al., 2009, 441 442 Nelms et al., 2015). Expert judgement is likely to also have a role to play when deciding 443 whether any single pairwise similarity value is biologically significant, taking into account the observed differences in chemical structures, with reference to understanding of how this is 444 likely to be mechanistically related to the toxicology. 445

Finally, recent work (Luechtefeld et al., 2016d) reported "read-across" predictions of skin 446 sensitisation based upon the most similar chemicals, in terms of Tanimoto similarities 447 448 computed from PubChem 2D molecular fingerprints, with available skin sensitisation data. Building upon that work, Luechtefeld et al. (2018) proposed approaches to "read-across" 449 predictions of toxicity based upon supervised machine learning which incorporated Tanimoto 450 similarity values, again calculated from PubChem 2D molecular fingerprints, to multiple 451 452 compounds with experimental toxicity data. (Further work in that latter study also proposed a 453 "data fusion" model, incorporating data for other endpoints, as well as similarity values.) In spite of the limitations of Tanimoto similarity values calculated from molecular fingerprints, 454 which are highlighted above, they reported empirically good results. 455

It may be speculated that these empirically good results (Luechtefeld et al., 2016d, Luechtefeld et al., 2018) could, in part, reflect the nature of the datasets investigated, e.g. those datasets may comprise categories of structurally similar chemicals acting via a similar mechanism, with structural differences within those categories being biologically relevant, for which Tanimoto similarity values based on molecular fingerprints can be expected to work best. For example, 31% of the skin sensitisation dataset of Luechtefeld et al. (2016d) was composed of Michael acceptors. However, further analysis is required to determine whether this is, indeed, the case.

Moreover, due to the inherent limitations of Tanimoto values of molecular similarities 463 464 computed from molecular fingerprints and the variation in similarity values which can be obtained with different fingerprints, as highlighted in the current work, it is unlikely that read-465 across predictions based upon these values using a single fingerprint would be optimal for all 466 relevant scenarios. Thus, for the examples that may be taken from the range of datasets 467 investigated in this study, different types of chemical similarity would be required for effective 468 469 and defensible analogue selection. Optimal read-across predictions are more likely to be obtained if care is taken to use a similarity measure based upon consideration of the mechanism 470 of action. Indeed, providing a mechanistic rationale for the predictions, rather than just 471 472 statistical validation, is more likely to lead to acceptance in a regulatory context.

In terms of analogue selection, fingerprints may be developed that have a stronger focus on mechanisms of action and thus are more applicable to address toxicological problems e.g. toxicologically relevant structural features such as the ToxPrint chemotypes could be used as a means of developing fingerprints (Richard et al., 2016). The assumption underpinning the improvement that may be assumed in analogue selection and justification is that such fingerprints, if used, would provide better focus on the MIE which is at the heart of mechanistic similarity but which may not be captured by the commonly used methods investigated in this 480 study. It is further acknowledged that the use of a broad fingerprint method based around 481 known toxicologically relevant fragments could assist in situations where the precise MIE may 482 not be known. However, the development of new fingerprints to aid toxicological read-across 483 would most appropriately be carried out on an endpoint specific basis, rather than assuming a 484 single fingerprint could be developed for all endpoints.

485

## 486 5. CONCLUSIONS

In conclusion, molecular fingerprint similarity matrices can be used as a means of identifying 487 possible analogues in some contexts. However, on their own, it is difficult to use generic 488 489 similarity measures computed from generic, purely structurally based, fingerprints to support a read-across hypothesis or justification. This is due to several known limitations of generic 490 491 similarity measures calculated from these fingerprints, which are highlighted in the current 492 work. They are liable to exhibit activity cliffs (where small changes to the overall molecular structure, resulting in high similarity values, lead to significant changes in biological activity). 493 The fingerprints may not capture the relevant structural variation (depending upon the 494 fingerprint method) and treat mechanistically irrelevant structural variation equally to 495 mechanistically relevant structural variation. Similarity matrices, calculated from different 496 497 fingerprints, show greater concordance and are better suited to analogue identification for less diverse datasets, especially homologous series. This suggests they could be most appropriate 498 for read-across within a homologous series, acting via a common mechanism, for which the 499 500 variation in chemical structure is known to be related to biological activity This could avoid the pitfall of fingerprint based similarity measures reflecting biologically irrelevant structural 501 variation. Hence, for a read across setting, users of chemically diverse datasets could benefit 502 503 from first forming categories when using molecular fingerprint similarity values.

504 Whilst Tanimoto similarity values computed from generic molecular fingerprints have been integrated into recent machine learning predictions of toxicity within diverse datasets with 505 empirically successful results, the limitations of these similarity values, highlighted in our work, 506 507 mean that other approaches to similarity assessment are preferable for read-across. Ideally, similarity values which reflect biologically relevant information, informed by mechanistic 508 understanding, should be employed. This is especially the case in a regulatory context, where 509 510 a mechanistic justification is likely to be required. More preferable approaches to similarity assessment could entail the previously outlined approach, i.e. first applying a mechanism based 511 512 categorisation of the dataset, such that the use of generic similarity values based on molecular fingerprints would only be used to fine tune read-across within a homologous series. 513

More generally, when calculating similarity, the user needs to give careful consideration to the selection of the most appropriate similarity measure to use and, where possible, link this to rational consideration of the mechanism underpinning the endpoint, e.g. in terms of the Molecular Initiating Event (MIE). Following the cautionary examples presented in this work, the following recommendations are made concerning the use of generic similarity coefficients based on molecular fingerprints for read-across predictions of toxicity.

Fingerprint-derived measures of molecular similarity can be a useful means of identifying
close structural analogues and may have use in the application of read-across for data gap
filling. Such methods may provide a useful visual approach to molecular similarity.

The similarity value is dependent on the type of fingerprint, or, if a more general similarity
 value is computed, the descriptors and/or properties used for its calculation. The user
 should acquaint themselves with the different fingerprint methods and their intended
 purpose. A method tailored to the toxicity endpoint should ideally be applied.

527 Of the fingerprint methods considered in this study, there is evidence that Tanimoto \_ similarity values derived from CDK Standard, CDK MACCS, CDK Extended and CDK 528 PubChem fingerprints showed some concordance, for some scenarios, with similarity 529 530 values for CDK FCFP6 and the CDK ECFP4 providing different information. Further work is required to understand the significance of these findings and at this time no single 531 fingerprint method from those investigated could be considered to be the most optimum. 532 These fingerprints may be appropriate to find "structural" analogues in terms of pure 533 chemistry, but these may not be appropriate for toxicological read-across without 534 535 interpretation and further mechanistic knowledge.

Where known, knowledge of the MIE will guide the successful application of molecular
similarities for toxicological read-across. Reference to the MIE will improve mechanistic
justification of the analogue selection and might be achieved with fingerprints that take
account of the structural basis of toxicity for specific endpoints. Fingerprints must be
chosen and interpreted such that they avoid pitfalls such as activity cliffs i.e. the selection
of close structural analogues, according to the fingerprint derived similarity measure,
which have different activity due to the effect of structural change on the MIE.

Whilst a justifiable means of identifying analogues, the use of the MIE is only appropriate
to relevant toxicological endpoints, i.e. where the MIE is known, and identifying the MIE
is only one step in the overall read-across process, which may involve the collation of
multiple lines of evidence.

Fingerprint-derived measures of similarity should be used to identify analogues for readacross for large heterogeneous datasets with caution, unless the similarity measures can be
shown to clearly relate to biologically relevant structural variation and not to capture
biologically irrelevant variation. Where they are known, this justification should be made

with reference to relevant mechanism(s) of action, for instance relating to the MIE.
However, generic fingerprint similarity measures do not fulfil these criteria, so must be
used with caution for large, chemically diverse datasets.

Arguably, the most suitable use of generic fingerprint-derived similarity measures for read-554 555 across within large, chemically diverse datasets is following sub-categorisation. (However, 556 further work is required to determine the extent to which this yields better predictive performance than integrating these similarity measures within machine learning 557 approaches, which have recently been advocated. Moreover, sub-categorisation which 558 removes biologically irrelevant structural variation may result in the fingerprint-derived 559 similarity measures being optimally predictive, yet redundant if read-across is performed 560 by expert examination of the structures within the category.) Sub-categorisation should 561 preferably be performed using a mechanistically based method. If sub-categorisation 562 yields homologous series, acting via a common mechanism, for which all the structural 563 564 variation is expected to be biologically relevant, generic fingerprint-derived similarity measures could be suitable for fine tuning and confirming analogue identification for read-565 566 across.

However, even within categories of chemicals acting via a common mechanism, the use
 of alternative similarity measures, based upon mechanistic understanding of the endpoint
 of interest, should be considered for read-across purposes. For example, similarity
 coefficients can be computed from mechanistically relevant fingerprints or descriptors.

571 Overall, fingerprint-derived measures of molecular similarity may be a useful method in the in 572 silico toolbox for data gap filling. However, they are likely to be optimally predictive within a 573 small, mechanistically derived category and, ideally, the specific similarity measure should be 574 appropriate to the chemistry and endpoint considered.

575

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Table 1. Definitions of terms using in this investigation.

Term	Definitions used for this study
Analogue (for read- across)	A similar compound, with measured endpoint data, to that for which read-across predictions are required for the endpoint in question. So-called "data rich" analogues are often most useful, as relevant physicochemical and biological data, in addition to endpoint data, may complement calculated measures of structural similarity.
Fingerprint-derived	Molecular similarity between two molecules calculated from
molecular similarity	molecular fingerprints. In this study, all similarity values were
	calculated in terms of the widely used Tanimoto coefficient
	(defined below).
Grouping	The process of assigning chemicals to a category of related
	compounds. This is usually based upon the hypothesis that the
	chemicals assigned to the category exhibit common properties
	with regard to the endpoint of interest, or exhibit simple trends
	in the endpoint related to structural variation. Similarity
	calculations within that category may then be used to make read-
	across predictions.
Molecular fingerprint	Typically, a binary vector with bits (0 or 1) calculated from the
	presence (1) or absence (0) of structural features. Six different
	types of fingerprints were investigated in this study.

Molecular similarity	The similarity, or degree of overlap, between two or more
	molecules. Similarity is defined in terms of a set of features,
	properties or calculated descriptors. In this investigation,
	molecular similarity was quantified by the Tanimoto
	coefficients calculated from the molecular fingerprints.
Tanimoto coefficient	A value calculated to represent the similarity between two
	objects represented as two vectors. For the purposes of this
	study, the objects were molecules and the vectors were the
	binary vectors corresponding to one out of many possible
	molecular fingerprints. An equation for calculating this
	coefficient, for binary vectors, is provided below.
Read-across	The process of interpolating or extrapolating a value of some
	endpoint of interest between similar compounds. This
	investigation focussed on read-across for various toxicological
	endpoints. In the context of the current work, the focus is upon
	read-across predictions made using pairwise comparison to one,
	or a few, suitably "similar" chemicals.

**Table 2**: The datasets investigated in this study with a description of the toxicological effect and mechanistic hypothesis for the factors which

would need to be captured by a similarity approach employed for read-across.

Data Set No.	Effect / Toxicity / MIE if known	Number of Chemicals	Types of Chemicals	Mechanistic hypothesis for similarity for read- across	Reference
<b>No.</b>	40 hour inhibition of growth to the ciliated protozoan Tetrahymena pyriformis. All chemicals are assumed to act by non-polar narcosis, although the exact MIE is unknown is is assumed to induce perturbation of cellular membranes.	87	Unreactive e.g. saturated alcohols and ketones	Toxicity is assumed to be a function of distribution to the active site (e.g. accumulation within membranes). Therefore, compounds fitting the non- polar narcosis domain should exhibit similar toxicity, if they have similar properties relating to distribution.	Ellison et al., 2008
2	Local LLNA skin sensitisation dataset of chemicals that have both chemical and biological diversity. The MIE is the (electrophilic) interaction of the toxicant with the immunoprotein	211	In terms of chemical diversity, the database contains aldehydes, ketones, aromatic amines, quinones, and acrylates, as well as compounds that have different reactivity mechanisms.	Compounds are required to be protein reactive, or be metabolised to a reactive form, to elicit skin sensitisation. Hence, molecules should be similar in a manner which reflects these requirements in order to cause similar skin sensitisation.	Gerberick et al., 2005

3	A category of perfluorinated acids on which read-across has been performed for repeat dose toxicity data. The MIE following repeated dose exposure is assumed to be binding to the peroxisome proliferator– activated receptor and other nuclear receptors.	7	A congeneric series of perfluorinated acids with a carbon chain length of between C6 – C12	PFAAs are chemically unreactive and assumed to be active by a similar mechanism (binding to nuclear receptor(s)). Hence, molecules should be similar in a manner which is related the degree of nuclear receptor binding, in order to exhibit similar toxicity.	Berggren et al., 2015
4	Alkanols (saturated aliphatic alcohols). This chemical category represents analogues with low general or no toxicity (i.e., toxicants which are non-reactive and exhibit no specific mode of action). There is no specific MIE other than that associated with perturbation of cellular membranes in the same manner as non-polar narcosis.	19	n-Alkanols within the range C5-C12	Alkanols form a homologous series of compounds associated with low toxicity	Berggren et al., 2015; Schultz et al 2017
5	Unsaturated aliphatic alcohols, exhibiting hepatotoxicity (toxicity to the liver). The MIE assumes metabolic transformationin the liver, to reactive electrophilic toxicants which react with biological macromolecules	26	Small (C3 to C6) primary and secondary β-olefinic alcohols.	Compounds are assumed to be metabolised to a common reactive metabolite which is responsible for their toxicity to the liver. Hence, similarity in terms of structural factors which affect the degree of	Berggren et al., 2015; Przybylak et al 2017

	in a mechanistically similar manner to			metabolism or the reactivity of the metabolite is	
	acrolein			required for toxicological similarity.	
	Alkyl phenols read-across case study for			These compounds are non-reactive and exhibit an	
				unspecific, reversible polar narcosis mode of toxic	
	repeated dose toxicity. A precise MIE is			action. Toxicity is reliant on their distribution to the	Berggren et al., 2015:
6	unknown, however they are associated with	20	Alkyl-substituted phenols		201881011 00 411, 2010,
	perturbation of callular membranes in the			site of action. Hence, similarity with respect to	Mellor et al 2017
	perturbation of central memoranes in the			factors which affect distribution will be required for	
	same manner as polar narcosis.			hisls sizel similarity	
				biological similarity.	

Table 3: Shows the range of the Tc scores calculated when utilising the different fingerprints for the perfluorinated acids dataset (dataset 3).

	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUA	PFDoA
PFHxA	1.00-1	0.87-1	0.83-1	0.83-1	0.83-1	0.83-1	0.83-1
PFHpA		1.00-1	0.92-1	0.91-1	0.91-1	0.91-1	0.91-1
PFOA			1.00-1	0.98-1	0.98-1	0.98-1	0.98-1
PFNA				1.00-1	1.00-1	1.00-1	1.00-1
PFDA					1.00-1	1.00-1	1.00-1
PFUA						1.00-1	1.00-1
PFDoA							1.00-1

Abbreviations relate to the following : Perfluorohexanoic acid (PFHxA), Perfluoroheptanoic acid (PFHpA), Perfluorooctanoic acid

(PFOA), Perfluorononanoic acid (PFNA), Perfluorodecanoic acid (PFDA), Perfluoroundecanoic acid (PFUA) and Perfluorododecanic acid (PFDA).

	2-tert.Butyl-5-methylphenol	2-tert-Butyl-4-methylphenol	2-tert-Butylphenol	2,6-di-tert-Butylphenol	2-tert-Amylphenol	2,4-di-tert-Amylphenol	2-sec-Butylphenol	2-n-Butylphenol	2-n-Pentylphenol	2-IsopropyI-5-methylphenol (thymol)	2-Methyl-5-isopropylphenol (carvacrol)	3-Methyl-6-n-butylphenol	2-Ethyl-5-methylphenol	2-Isopropylphenol	2,4-Diisopropylphenol	2,5-Dimethylphenol	2,6-Dimethylphenol	3-tert-butylphenol	4-tert-Butylphenol	4-tert-Buty-2-methylphenol
2-tert.Butyl-5- methylphenol	1.00-1	0.54-1	0.50-1	0.41-1	0.31- 0.95	0.31- 0.91	0.23- 0.9	0.20- 0.89	0.20- 0.91	0.46-1	0.31-1	0.42- 0.97	0.45- 0.96	0.26- 0.95	0.27-1	0.52- 0.93	0.25-0.86	0.37-1	0.32- 1	0.40-1
2-tert-Butyl-4- methylphenol	0.54-1	1.00-1	0.50-1	0.41-1	0.35- 0.96	0.39- 0.98	0.23- 0.91	0.20- 0.9	0.20- 0.92	0.39-1	0.31-1	0.33- 0.88	0.39- 0.86	0.26- 0.95	0.31-1	0.39- 0.84	0.25-0.91	0.32-1	0.32- 1	0.45-1
2-tert-Butylphenol	0.50-1	0.50-1	1.00-1	0.54-1	0.63- 0.99	0.34- 0.92	0.33- 0.97	0.34- 0.95	0.34- 0.95	0.23-1	0.22-1	0.21- 0.9	0.22- 0.91	0.38- 0.97	0.22-1	0.25- 0.89	0.28-0.92	0.36-1	0.36- 1	0.34-1
2,6-di-tert- Butylphenol	0.41-1	0.41-1	0.54-1	1.00-1	0.41- 0.97	0.27- 0.95	0.22- 0.92	0.27- 0.91	0.27- 0.93	0.19-1	0.19-1	0.21- 0.88	0.19- 0.87	0.25- 0.95	0.19-1	0.21- 0.85	0.41-0.94	0.42-1	0.38- 1	0.31-1
2-tert-Amylphenol	0.31- 0.95	0.35- 0.96	0.63- 0.99	0.41- 0.97	1.00-1	0.58-1	0.39- 0.95	0.40- 0.94	0.40- 0.97	0.24- 0.9	0.20- 0.9	0.26- 0.91	0.27- 0.9	0.39- 0.95	0.20- 0.91	0.23- 0.88	0.25-0.91	0.28- 0.93	0.28- 0.92	0.27-0.95

Table 4: Shows the range of the Tc scores calculated when utilising the different fingerprints for the alkylphenols dataset (dataset 6).

2,4-di-tert- Amylphenol	0.31- 0.91	0.39- 0.98	0.34- 0.92	0.27- 0.95	0.58-1	1.00-1	0.24- 0.91	0.24- 0.88	0.24- 0.9	0.25- 0.87	0.21- 0.87	0.26- 0.88	0.27- 0.87	0.23- 0.89	0.24- 0.96	0.24- 0.85	0.18-0.89	0.29- 0.89	0.32- 0.92	0.39-0.99
2-sec-Butylphenol	0.23- 0.9	0.23- 0.91	0.33- 0.97	0.22- 0.92	0.39- 0.95	0.24- 0.91	1.00-1	0.39- 0.96	0.39- 0.97	0.35- 0.94	0.26- 0.94	0.29- 0.91	0.30- 0.92	0.67-1	0.34- 0.93	0.26-0.9	0.24-0.93	0.20- 0.91	0.19- 0.9	0.19-0.9
2-n-Butylphenol	0.20- 0.89	0.20- 0.9	0.34- 0.95	0.27- 0.91	0.40- 0.94	0.24- 0.88	0.39- 0.96	1.00-1	0.86- 0.98	0.24- 0.91	0.20- 0.91	0.57- 0.96	0.35- 0.93	0.39- 0.96	0.20-0.9	0.23- 0.93	0.25-0.94	0.21- 0.9	0.19- 0.89	0.20-0.89
2-n-Pentylphenol	0.20- 0.91	0.20- 0.92	0.34- 0.95	0.27- 0.93	0.40- 0.97	0.24- 0.9	0.39- 0.97	0.86- 0.98	1.00- 1	0.24- 0.91	0.20- 0.91	0.52- 0.94	0.35- 0.93	0.39- 0.97	0.20- 0.92	0.23- 0.91	0.25-0.94	0.21- 0.9	0.19- 0.89	0.20-0.91
2-Isopropyl-5- methylphenol (thymol)	0.46-1	0.39-1	0.23-1	0.19-1	0.24- 0.9	0.25- 0.87	0.35- 0.94	0.24- 0.91	0.24- 0.91	1.00-1	0.41-1	0.48- 0.97	0.52- 0.99	0.52- 0.95	0.43-1	0.54- 0.96	0.26-0.88	0.21-1	0.20- 1	0.28-1
2-Methyl-5- isopropylphenol (carvacrol)	0.31-1	0.31-1	0.22-1	0.19-1	0.20- 0.9	0.21- 0.87	0.26- 0.94	0.20- 0.91	0.20- 0.91	0.41-1	1.00-1	0.29- 0.97	0.31- 0.98	0.34- 0.95	0.43-1	0.58- 0.96	0.30-0.88	0.21-1	0.19- 1	0.31-1
3-Methyl-6-n- butylphenol	0.42- 0.97	0.33- 0.88	0.21- 0.9	0.21- 0.88	0.26- 0.91	0.26- 0.88	0.29- 0.91	0.57- 0.96	0.52- 0.94	0.48- 0.97	0.29- 0.97	1.00-1	0.68- 0.99	0.28- 0.91	0.26- 0.89	0.48- 0.97	0.23-0.89	0.19- 0.91	0.18- 0.86	0.26-0.89
2-Ethyl-5- methylphenol	0.45- 0.96	0.39- 0.86	0.22- 0.91	0.19- 0.87	0.27- 0.9	0.27- 0.87	0.30- 0.92	0.35- 0.93	0.35- 0.93	0.52- 0.99	0.31- 0.98	0.68- 0.99	1.00- 1	0.30- 0.92	0.27- 0.88	0.52- 0.98	0.25-0.9	0.21- 0.92	0.19- 0.87	0.27-0.88
2-Isopropylphenol	0.26- 0.95	0.26- 0.95	0.38- 0.97	0.25- 0.95	0.39- 0.95	0.23- 0.89	0.67-1	0.39- 0.96	0.39- 0.97	0.52- 0.95	0.34- 0.95	0.28- 0.91	0.30- 0.92	1.00-1	0.50- 0.95	0.30-0.9	0.28-0.93	0.23- 0.95	0.21- 0.95	0.22-0.95
2,4- Diisopropylphenol	0.27-1	0.31-1	0.22-1	0.19-1	0.20- 0.91	0.24- 0.96	0.34- 0.93	0.20- 0.9	0.20- 0.92	0.43-1	0.43-1	0.26- 0.89	0.27- 0.88	0.50- 0.95	1.00-1	0.30- 0.86	0.21-0.91	0.21-1	0.19- 1	0.27-1

2,5-Dimethylphenol	0.52- 0.93	0.39- 0.84	0.25- 0.89	0.21- 0.85	0.23- 0.88	0.24- 0.85	0.26- 0.9	0.23- 0.93	0.23- 0.91	0.54- 0.96	0.58- 0.96	0.48- 0.97	0.52- 0.98	0.30- 0.9	0.30- 0.86	1.00-1	0.35-1	0.23- 0.9	0.22- 0.85	0.36-0.85
2,6-Dimethylphenol	0.25- 0.86	0.25- 0.91	0.28- 0.92	0.41- 0.94	0.25- 0.91	0.18- 0.89	0.24- 0.93	0.25- 0.94	0.25- 0.94	0.26- 0.88	0.30- 0.88	0.23- 0.89	0.25- 0.9	0.28- 0.93	0.21- 0.91	0.35-1	1.00-1	0.31- 0.87	0.25- 0.86	0.30-0.9
3-tert-butylphenol	0.37-1	0.32-1	0.36-1	0.42-1	0.28- 0.93	0.29- 0.89	0.20- 0.91	0.21- 0.9	0.21- 0.9	0.21-1	0.21-1	0.19- 0.91	0.21- 0.92	0.23- 0.95	0.21-1	0.23-0.9	0.31-0.87	1.00-1	0.50- 1	0.45-1
4-tert-Butylphenol	0.32-1	0.32-1	0.36-1	0.38-1	0.28- 0.92	0.32- 0.92	0.19- 0.9	0.19- 0.89	0.19- 0.89	0.20-1	0.19-1	0.18- 0.86	0.19- 0.87	0.21- 0.95	0.19-1	0.22- 0.85	0.25-0.86	0.50-1	1.00- 1	0.48-1
4-tert-Buty-2- methylphenol	0.40-1	0.45-1	0.34-1	0.31-1	0.27- 0.95	0.39- 0.99	0.19- 0.9	0.20- 0.89	0.20- 0.91	0.28-1	0.31-1	0.26- 0.89	0.27- 0.88	0.22- 0.95	0.27-1	0.36- 0.85	0.30-0.9	0.45-1	0.48- 1	1.00-1

Table 5: Shows chemicals compared from the LLNA skin sensitisation dataset (dataset 2) and the range of Tc scores calculated with different

fingerprints.

		Shows	Range of Tc					
Chemica	als Compared			across				
		CDK	CDK	CDK	CDK	CDK	CDK	001000
(LLNA score, sensitiser clas	sification (Gerberick et al., 2005))	Ctandard	MACCE	Extended	DubCham	FCEDG		fingerprints
		Stanuaru	MACCS	Extended	Pubchem	гсгро	ECFP4	
1,4- dihydroxyquinone	Resorcinol (5.0, non-sensitiser)							
(0.1, strong sensitiser)								
	ОН							
ОН		0.79	0.88	0.79	0.87	0.54	0.43	0.43-0.88
	но							
$\square$								
ОН								
3-phenylenediamine	Aniline (5.0, weak sensitiser)							
		0.00	0.70	0.00	0.02	0.75	0.50	0.53.0.03
(2.5, strong sensitiser)		0.89	0.78	0.88	0.92	0.75	0.53	0.53-0.92

H <sub>2</sub> N	NH <sub>2</sub>							
3,4-dihydrocoumarin (2.5, moderate sensitiser)	Coumarin (5.0, non-sensitiser)	0.43	0.73	0.48	0.86	0.40	0.35	0.35-0.86
3,4-dihydrocoumarin (2.5, moderate sensitiser)	6-methylcoumarin (5.0, non-sensitiser)	0.40	0.74	0.43	0.83	0.27	0.21	0.21-0.83

#### **Figure Captions:**

Figure 1. Diagrammatic illustration of how a chemical structure may be converted into a bit string.

Figure 2: Shows overview of the Tc similarity matrices for the perfluorinated acids dataset (dataset 3), in terms of each of the computed fingerprints: (A) CDK Standard fingerprints;(B) CDK MACCS fingerprints; (C) CDK Extended fingerprints; (D) CDK PubChem fingerprints; (E) CDK FCFP6 fingerprints; (F) CDK ECFP4 fingerprints.

Figure 3: Shows overview of the Tc similarity matrices for the alkylphenols dataset (dataset 6), in terms of each of the computed fingerprints: (A) CDK Standard fingerprints; (B) CDK MACCS fingerprints; (C) CDK Extended fingerprints; (D) CDK PubChem fingerprints; (E) CDK FCFP6 fingerprints; (F) CDK ECFP4 fingerprints.

Figure 4: Shows overview of the Tc similarity matrices for the saturated alcohols dataset
(dataset 4), in terms of each of the computed fingerprints: (A) CDK Standard fingerprints;
(B) CDK MACCS fingerprints; (C) CDK Extended fingerprints; (D) CDK PubChem
fingerprints; (E) CDK FCFP6 fingerprints; (F) CDK ECFP4 fingerprints.

Figure 5: Shows overview of the Tc similarity matrices for the unsaturated alcohols dataset (dataset 5), in terms of each of the computed fingerprints: (A) CDK Standard fingerprints;(B) CDK MACCS fingerprints; (C) CDK Extended fingerprints; (D) CDK PubChem fingerprints; (E) CDK FCFP6 fingerprints; (F) CDK ECFP4 fingerprints.

Figure 6: Shows overview of the Tc similarity matrices for the non-polar narcotic dataset (dataset 1), in terms of each of the computed fingerprints: (A) CDK Standard fingerprints;(B) CDK MACCS fingerprints; (C) CDK Extended fingerprints; (D) CDK PubChem fingerprints; (E) CDK FCFP6 fingerprints; (F) CDK ECFP4 fingerprints.





Bit value set in fingerprint

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	1	1	CDK Sta	ndard			
	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUA	PFDoA
PFHxA	1.00	0.94	0.87	0.85	0.85	0.85	0.85
PFHpA	0.94	1.00	0.92	0.91	0.91	0.91	0.91
PFOA	0.87	0.92	1.00	0.98	0.98	0.98	0.98
PRNA	0.85	0.91	0.98	1.00	1.00	1.00	1.00
PFDA	0.85	0.91	0.98	1.00	1.00	1.00	1.00
PRUA	0.85	0.91	0.98	1.00	1.00	1.00	1.00
PFDoA	0.85	0.91	0.98	1.00	1.00	1.00	1.00

(B)

	ĩ		CDK N	ACCS	ā.		
	PFHx/	PFHp/	PFOA	PFNA	PFDA	PFUA	PFDoA
PFHxA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFHpA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFOA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFNA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFDA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFUA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFDoA	1.00	1.00	1.00	1.00	1.00	1.00	1.00

(C)

		CD	K Exte	nded			
	PFHx A	PFHp A	PFOA	PFNA	PFDA	PFUA	PFDo A
PFHxA	1.00	0.92	0.85	0.84	0.84	0.84	0.84
PFHpA	0.92	1.00	0.92	0.91	0.91	0.91	0.91
PFOA	0.85	0.92	1.00	0.99	0.99	0.99	0.99
PFNA	0.84	0.91	0.99	1.00	1.00	1.00	1.00
PFDA	0.84	0.91	0.99	1.00	1.00	1.00	1.00
PFUA	0.84	0.91	0.99	1.00	1.00	1.00	1.00
PFDoA	0.84	0.91	0.99	1.00	1.00	1.00	1.00

(D)

		CD	K Pub	Chem			
	PFHx A	PFHp A	PFOA	PFNA	PFDA	PFUA	PFDo A
PFHxA	1.00	0.91	0.86	0.86	0.86	0.86	0.86
PFHpA	0.91	1.00	0.94	0.94	0.94	0.94	0.94
PFOA	0.86	0.94	1.00	1.00	1.00	1.00	1.00
PFNA	0.86	0.94	1.00	1.00	1.00	1.00	1.00
PFDA	0.86	0.94	1.00	1.00	1.00	1.00	1.00
PFUA	0.86	0.94	1.00	1.00	1.00	1.00	1.00
PFDoA	0.86	0.94	1.00	1.00	1.00	1.00	1.00

# (E)

		(	DK FC	FP6			
	PFHx A	PFHp A	PFOA	PFNA	PFDA	PFUA	PFDo A
PFHxA	1.00	0.87	0.83	0.83	0.83	0.83	0.83
PFHpA	0.87	1.00	0.96	0.96	0.96	0.96	0.96
PFOA	0.83	0.96	1.00	1.00	1.00	1.00	1.00
PFNA	0.83	0.96	1.00	1.00	1.00	1.00	1.00
PFDA	0.83	0.96	1.00	1.00	1.00	1.00	1.00
PFUA	0.83	0.96	1.00	1.00	1.00	1.00	1.00
PFDoA	0.83	0.96	1.00	1.00	1.00	1.00	1.00

(F)

		C	DK EC	FP4			
	PFHx A	PFHp A	PFOA	PFNA	PFDA	PFUA	PFDo A
PFHxA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFHpA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFOA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFNA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFDA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFUA	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PFDoA	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Figure 3

|   | CONStandard  
   
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| (A)   | 4 contrology 2 methylynesial<br>4 contrology 3 methylynesial<br>3 contrology 4 methyl<br>3 contrology 4 methyl<br>3 contrology 4 methyl<br>3 contrology 4 methyl<br>3 contrology 4 methyl phenol<br>3 Methyl 5 methyl phenol<br>4 Methyl 6 methyl phenol<br>3 Methyl 5 methyl phenol<br>4 Methyl 6 methyl phenol<br>3 Methyl 5 methyl phenol<br>3 Methyl 6 methyl 6 methyl 1 Methyl<br>3 Methyl 6 methyl 6 methyl 1 Methyl<br>3 Methyl 6 met   
   
  | (B) (B)  | 2 - ann Anny Anna an<br>2 - ann Anny Anna an<br>2 - ann Ann Anna ann  
   
   | A 1101 Somethological<br>Solection Social Social Social Social<br>Solection Social Social Social Social Social<br>Social Social Social Social Social Social Social<br>Social Social Social Social Social Social<br>Social Social Social Social Social   | a (1. Description of a second strength of the   
   | A cart lange 2 monthly part and<br>A cart lange 3 monthly part and<br>1 monthly build a month   
   | (C)   
  | 2,6 clitert- knyl i ke ol<br>2 cert- knyl i ke ol<br>2 cert- knyl 4- met kylke ol<br>2 cert- knyl 5- met kylke orl   
  | 2-sec-bary(phero)<br>2,4-di-tent-Amy(phero)<br>2-tent-Amy(phero)   | 2-isop ropyl S- methyl phenol [114/mol]<br>2-is-lennýl phenol<br>2-i-buryl phenol  | 2-Etityl-S-metityl phenol<br>3-Metityl-6-n-butyl phenol<br>2-Metityl-Siscopropyl phenol (cirvacrd)   
  | 2,4- tiko pro pyl pienol<br>2-iso pro pyl pienol  | 3-cert-lastyl phe vol<br>2,6-Dimethyl y kovol<br>2,5-Dimethyl y kovol  
   | 4-tert-burg-2-methylphe rol<br>4-tert-burghphe rol   |
| 2-tot.Suly/&-molty/ptenol   | 120 0.17 0.17 0.87 0.85 0.35 0.11 0.84 0.29 0.86 0.89 0.15 0.85 0.85 0.10 0.89 0.24 0.11 0.85 0.11   
   
  | 36(54)5+chglord 10 10 10 10  | 18 18 IN 19   
   
   | 10110 10 10 1   | 3 25 12 134 1   
   
  | 194 100 100 100  
  | 2-CerC Bullyi-S-methylphen al  | 00 0.75 0.79 0.65   
   | 0.69 0.59 0.72   | 0.65 0.52 0.95 0   
   | .85 0.71 0.94   | 0.82 0.65 0.  
   | 71 0.54 0.70   | 0.71 0.71  |
| 2-tot-6dyletenel  | 0.77 0.81 1.00 0.85 0.79 0.86 0.73 0.86 0.80 0.74 0.85 0.57 0.75 0.86 0.30 0.54 0.84 0.85 0.85 0.85 0.85   
   
  | 32(A)  |   
   
   |   |   
   
  |  
  | 2-CerC-8 uD/ahena 0  | 79 0.79 1.00 0.85   
   | 0.50 0.55 0.75   | 0.64 0.52 0.75 0   
   | 55 0.57 0.75  | 0.55 0.52 0   
   | 55 0.57 0.65   | 0.72 0.52  |
| 1,8-di-tert-Butylphenel   | 0.57 0.77 0.25 1.00 0.59 0.59 0.54 0.57 0.55 0.54 0.59 0.50 0.55 0.75 0.75 0.45 0.54 0.59 0.70 0.59  
   
  | 1552654#erd 10 10 10 10  | 122 12 13 1N 128  
   
   | 193 100 100 100 1   | 1 25 12 24 1  
   
  | 194 122 122 122  
  | 2,8-di-tert-Butylphenel 0  | 55 0.76 0.85 1.00   
   | 0.70 0.53 0.64   | 0.56 0.52 0.66 0   
   | 52 0.50 0.65  | 0.76 0.72 0.  
   | 47 0.54 0.70   | 0.67 0.67  |
| 2-tot-Amylphonel  | 0.85 0.87 0.79 0.89 100 0.82 0.92 0.82 0.75 0.86 0.80 0.70 0.85 0.78 0.84 0.47 0.45 0.82 0.85 0.82   
   
  | 2014mj#cml 18 18 18 18   | 8 100 100 000 <mark>070</mark>  
   
   | 1818 18 13 13   | 8 88 88 <mark>87 8</mark>   
   
  |  
  | 2-CorC-Amylphonal 0  | 59 0.65 0.50 0.70   
   | 1.00 0.51 0.91   | 0.79 0.75 0.67 0   
   | 61 0.69 0.65  | 0.74 0.62 0   
   | 45 0.44 0.67   | 0.65 0.52  |
| 2,4-á Kort Amylphonol   | 036 0.45 0.45 0.45 0.45 0.75 0.71 0.86 0.35 0.51 0.36 0.40 0.40 0.40 0.55 0.52   
   
  | 245154mpbox 18 18 18 18  | 1 100 100 100 <mark>070</mark>  
   
   | 1818 18 <mark>14 1</mark> 1   | 8 68 <u>68 <mark>68 6</mark>8 6</u>   
   
  | 17 18 18 18  
  | 2,4-di-tert-Amylphenel 0   | 52 0.65 0.65 0.65   
   | 0.51 1.00 0.74   | 0.65 0.62 0.55 0   
   | 55 0.60 0.57  | 0.60 0.70 0.  
   | 40 0.59 0.55   | 0.62 0.65  |
| 2-ses-Buly (plend   | 0.71 0.73 0.74 0.92 0.75 1.00 0.89 0.82 0.75 0.87 0.77 0.72 0.82 0.71 0.94 0.85 0.81 0.81 0.89   
   
  | 3er81/demi 0.4 0.4 0.4 0.4   | ·   
   
   | 0.03 03 08 0  | 0 <u>07 04 08 0</u>   
   
  | DE DA DA DA  
  | 2-acc-Bu D/phone   0   | 72 0.72 0.75 0.64   
   | 0.91 0.74 1.00   | 0.87 0.50 0.74 0   
   | .65 0.75 0.74   | 0.85 0.70 0.  
   | 55 0.55 0.61   | 0.50 0.55  |
| 2-n-Sut)(pficre)<br>2-n-Rentyln henn i  | 054 0.88 0.55 0.57 0.52 0.71 0.59 1.00 0.52 0.86 0.51 0.88 0.55 0.74 0.55 0.49 0.49 0.55 0.54 0.55   
   
  | Seturgene i 12 12 12 12 12   |   
   
   |   |   
   
  |  
  | 2-n-Butyiphenel 0  | 5 0.55 0.54 0.55  
   | 0.79 0.88 0.87   | 1.00 0.92 0.88 0   
   | 50 0.25 0.65  | 0.75 0.52 0   
   | 42 047 0.54  | 0.55 0.50  |
| 2-isto roovi-6-meth viohen ol   | DEA DIA DIA DIA DIA DIA DIA DIA DIA DIA DEI DI DEI DIE DEE DIE DIE DIE DIE DIE   
   
  | State of the second sec   |  
   
  | 1012 12 12 12   |  
   
   |   | 2-isonovi-5-methylohend n   
  | 0.72 0.75 0.65   
  | 0.57 0.57 0.76   | 0.55 0.51 1.00 0   | 90 0.75 0.99   
  | 0.55 0.71 0   | 74 055 0.57  
   | 0.65 0.72  |
| 2-Meth vi-5-lso pro pvibh engl  | 0.20 0.50 0.50 0.50 0.51 0.57 0.51 0.57 0.51 1.00 0.71 0.51 0.75 0.55 0.71 0.55 0.75 0.55 0.71   
   
  | Might (Stort richard 100 100 100 100   | 10 10 10 10 10  
   
   | 12120 10 10 10 1  | 1 DE 10 DE 1  
   
  | 19 10 10 10  
  | 2-Methyl-5-iscorcoviphenol o   | 55 0.57 0.55 0.52   
   | 0.61 0.53 0.65   | 0.60 0.56 0.90 1   
   | 00 0.59 0.39  | 0.76 0.65 0.  
   | 72 0.54 0.75   | 0.65 0.72  |
| 3-Meth yl-6-n-butyl phen ol   | 0.73 0.55 0.57 0.50 0.70 0.61 0.77 0.55 0.50 0.77 0.71 1.00 0.76 0.55 0.55 0.55 0.43 0.55 0.51 0.55  
   
  | Histolfen-Autophand ten cen cen cen  | 1 CN CA 10 CB   
   
   | 100 CO 100 CO 100 CO  | a <u>an na na n</u>   
   
  |  
  | 3-Methyl6-n-butylphenol a  | 71 0.55 0.57 0.50   
   | 0.69 0.50 0.75   | 0.85 0.79 0.75 0   
   | 62 1.00 0.74  | 0.64 0.55 0.  
   | 55 0.45 0.51   | 0.52 0.57  |
| 2-Eth yl-5-meth ylph enol   | 035 0.75 0.75 0.85 0.85 0.72 0.85 0.80 0.80 0.80 0.81 0.78 1.00 0.84 0.71 0.72 0.55 0.82 0.85 0.71   
   
  | 28th/6-math/phunol ans are are   | 1 12 12 12 12 12  
   
   | <mark></mark>   | 0 08 <mark>08 </mark> 09 0  
   
  | 194 <mark>175 175 175</mark>   
  | 2-Ethyl-5-methylphenol 0   | 94 0.72 0.75 0.65   
   | 0.65 0.57 0.74   | 0.65 0.60 0.99 0   
   | 89 0.74 1.00  | 0.84 0.70 0.  
   | 75 0.55 0.65   | 0.67 0.72  |
| 2-isop ropyl phen ol  | 0.25 0.26 0.25 0.76 <mark>0.75 0.65 0.25 0.74 0.65 0.26 0.78 0.26</mark> 0.24 1.00 0.25 <mark>0.65 0.64 0.72 0.75</mark> 0.52  
   
  | Hop to john d  | 5 676 68 677 <mark>692</mark>   
   
   | 19 125 125 <mark>120 1</mark>   | 8 <mark>20 28 29</mark> 3   
   
  | 10 15 15 15  
  | 2-isopropylphenol d  | 52 0.51 0.55 0.76   
   | 0.74 0.50 0.55   | 0.75 0.67 0.85 0   
   | 75 0.54 0.34  | 1.00 0.79 0.  
   | 64 0.65 0.72   | 0.70 0.78  |
| 2,4-Disopropylphenol  | 0.70 0.80 0.73 0.75 0.64 0.59 0.71 0.55 0.81 0.72 0.86 0.55 0.71 0.55 1.00 0.55 0.65 0.55 0.59   
   
  | 245imprg pice  100 100 100 100   | 1 <u>12 13 <mark>14 1</mark>9</u>   
   
   | 1911 III III III I  | <mark>9 85 18 89</mark> 1   
   
  | 194 120 120 120  
  | 2,4-Di sa propyl phenol 0  | 55 0.55 0.69 0.72   
   | 0.62 0.70 0.70   | 0.62 0.55 0.71 0   
   | 65 0.55 0.70  | 0.79 1.00 0.  
   | 52 0.57 0.60   | 0.65 0.55  |
| 1,5-Omethylphonel   | 0.59 0.55 0.54 0.45 0.47 0.40 0.34 0.49 0.45 0.71 0.71 0.55 0.72 0.55 0.55 1.00 0.73 0.55 0.51 0.59  
   
  | 135mb/plote 154 154 154 154 154  |   
   
   | 19 19 19 19 19  | N 02 03 100 1   
   
  | 10 19 19 19  
  | 2,5-Dimethylphenal 0.  | 71 0.55 0.55 0.47   
   | 0.45 0.40 0.55   | 0.42 0.45 0.74 0   
   | 72 0.55 0.75  | 0.64 0.52 1   
   | .00 0.74 0.55  | 0.52 0.59  |
| z,s-ometriyprotei<br>sutetubituldiceel  | 014 0.51 0.54 0.54 0.54 0.55 0.40 0.51 0.40 0.55 0.55 0.55 0.55 0.55 0.55 0.55   
   
  | Conductioned In the later  |   
   
   |   | 9 20 109 101 1  
   
  | 10 10 10 10 10   
  | 2,5-Omeony(prena) 0  |   
   | 0.44 0.39 0.33   | 0.47 0.43 0.55 0   
   | 54 0.45 0.55<br>75 0.51 0.65  | 0.65 0.57 0.  
   | 74 100 0.47<br>55 0.47 1.00  | 0.47 0.52  |
| 4-tot-5dylatenal  | 0.55 0.57 0.51 0.70 0.55 0.50 0.51 0.54 0.50 0.55 0.51 0.55 0.75 0.55 0.51 0.45 0.51 1.00 0.74   
   
  | 4br(&sider) 10 10 10 10  | 10 10 IN 19   
   
   | 122 100 100 100 1   | 3 25 10 19 1  
   
  | 19 10 10 10  
  | 4-tert-Butvishensi D   | 71 0.69 0.79 0.67   
   | 0.65 0.52 0.60   | 0.53 0.42 0.65 0   
   | 65 0.52 0.67  | 0.70 0.65 0.  
   | 52 0.47 0.80   | 1.00 0.75  |
| and a shift of  |  
   
  | and the second states of the second states and the second states and the second states are set of the second states are second states are set of the second states are second states are set of the second states are se   |   
   
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  |   | Autoric Suite Terret Number of 0   
   | 71 0.55 0.52 0.57   
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| 4-101-54)-4-mc1/yphonol   | contractions of the contraction  
   
  |  |   
   
   | COKPC798  |   
   
  |   | -  
   |   
   | CDK  | EC174  | N   
   | 0.75 0.65 0   |   
  | 0.75 1.00  |
| (D)   | A cost body 2 worksy be onl       3 cost body 2 worksy body 2 worksy be onl       3 cost body 2 worksy   
   
   | (E)  | 2 to 1. Bury 6 - northy broad<br>2 cont. Bury 6 - northy broad<br>2 cont. Bury 6 - northy broad<br>2 to 1. Bury 6 - northy broad   
   
  | 24 so pro yrd 6- mer hyl a bened (hlymod)<br>2- n Penryl phend<br>2- h Penryl phend<br>2- h Chryl he sil<br>2- d for a chryl he sil   | 2,4-biog papel are al<br>2-loop copy a bened<br>3- Chiplish methylationed<br>3-Methylish the hull phonoal<br>4- Amethylish the hull phonoal<br>2-Methylish science of phonoach for a successful  
   
   | 4 core havy2 -meetyd ple sol<br>3,9-fi mei tydy besol<br>3,9-fi mei tydy besol  
   | (F)  | 2.4 states and a state of the states of the  
  | 2,4-dt to it. Anny ite sol   | 2.4xx pro.pyl ≤ .net føj bend (filvynd)<br>2p-Pentyl plend<br>2p-Pentyl plend<br>2p-Pentyl plend   | 2. Et hyl-5- met hyl-phenol<br>3- Met hyl-6-n-but yl-phenol<br>2- Met hyl-5-tsopro pyl-phenol (zi wacrol)  
  | 2,4-bis a papy he sol<br>2-lisop ropy (pliend   | 3 - 40 K - Lunyk J he nol<br>2, 4 - 11 met hylj he nol<br>2, 5 - 11 met hylj he nol  
   | d test- July 2-nettyl ple sol<br>d test - July 1 ple sol   |
| (D)   | Status         Status<   
   
   | (E)  | 100         12         12         12           2         2         2         2         2           3         0         2         0         2         0           3         0         2         0         2         0           3         0         2         0         2         0           3         0         2         0         2         0           3         0         2         0         2         0           3         0         2         0         2         0         0           3         0         2         0         2         0 <td>2.4 storp prop/6 - most halp is heared         14 storp prop/6 - most halp is heared           2.4 storp prop/6 - most halp is heared         2.4 storp prop/6 - most halp is heared           2.4 storp respective And Alexand         2.6 storp halp is not storp in the storp in the storp is not storp in the storp in the</td> <td>2         2.4</td> <td>Image         Image         Image         Image           4 cont         Lary 2         A cont         Lary 2           3 cont         Lary 2         A cont         Lary 2           3 cont         Lary 2         Lary 2         Lary 2           3 cont         Lary 2         Lary 2</td> <td><b>(F)</b><br/>3-55554/45-red/yblend</td> <td>2 de de ce devoj konsul<br/>2 de de ce devoj konsul<br/>2 de de devoj konsul<br/>3 de devoj konsul</td> <td>2,4 dt to 1, Anty Je sol<br/>2,4 dt to 1, Anty Je sol<br/>2 dt 4,4 ot to 1, Anty Je sol<br/>2 dt 5,4 ot 1,4 ot 1</td> <td>24so pro pri-5- methyl phenod (thymod) 9<br/>2-n-Pennyl phenod
(thymod) 9<br/>2-n-Pennyl phenod 9<br/>2 - h-betyl phenod 9<br/>2 -</td> <td>2. Ethyl 5- methyl phenol 2<br/>3- Methyl 6- n buryl phenol 2<br/>2- Methyl 5- Stopro pyl phenol [za wacrol] 2</td> <td>2.4-Disa pay (she est<br/>2.4-Sop ropy) phenol</td> <td>2.5-16 molt high benal<br/>2.5-16 molt high benal<br/>2.5-16 molt high benal</td> <td>مراجع مراجع م<br/>مراجع مراجع مراجع<br/>مراجع مراجع مرا</td>  | 2.4 storp prop/6 - most halp is heared         14 storp prop/6 - most halp is heared           2.4 storp prop/6 - most halp is heared         2.4 storp prop/6 - most halp is heared           2.4 storp respective And Alexand         2.6 storp halp is not storp in the storp in the storp is not storp in the   | 2         2.4   
  | Image         Image         Image         Image           4 cont         Lary 2         A cont         Lary 2           3 cont         Lary 2         A cont         Lary 2           3 cont         Lary 2         Lary 2   
  | <b>(F)</b><br>3-55554/45-red/yblend  | 2 de de ce devoj konsul<br>2 de de ce devoj konsul<br>2 de de devoj konsul<br>3 de devoj konsul   
  | 2,4 dt to 1, Anty Je sol<br>2,4 dt to 1, Anty Je sol<br>2 dt 4,4 ot to 1, Anty Je sol<br>2 dt 5,4 ot 1,4 ot 1  | 24so pro pri-5- methyl phenod (thymod) 9<br>2-n-Pennyl phenod (thymod) 9<br>2-n-Pennyl phenod 9<br>2 - h-betyl phenod 9<br>2 -  
  | 2. Ethyl 5- methyl phenol 2<br>3- Methyl 6- n buryl phenol 2<br>2- Methyl 5- Stopro pyl phenol [za wacrol] 2  | 2.4-Disa pay (she est<br>2.4-Sop ropy) phenol  
  | 2.5-16 molt high benal<br>2.5-16 molt high benal<br>2.5-16 molt high benal   | مراجع م<br>مراجع مراجع مراجع<br>مراجع مراجع مرا  |
| (D)   | CDDACker     3 cross burdy is welly is w   
   
  | (E)  | 100         10         10         10         10           2         10         10         2         10         10           3         10         10         2         10         10           3         10         10         10         10         10           3         10         10         10         10         10           3         10         10         10         10         10           3         10         10         10         10         10           100         10         10         10         10         10         10   
   
   | Zana ne   | 2.4 Bits arm M Alexand<br>2. Isop rought bend<br>3. Isop rought bend<br>4. Isop rought bend<br>4. Isop rought bend<br>4. Mentry 5. Isoprototic arms. (Col.)<br>4. J. Mentry 5. Isoprototic arms. (Col.)   
   
  | 4 con. Key2 - Marky (Amena)<br>4 con. Key2 - Marky (Amena)<br>4 con. Key2 - Marky (Amena)<br>4 con. Key2 - Marky (Amena)<br>2 con. Home Ky (Amena)<br>2 con. Hom  | (F)  | 2. Galate tr. Juny (J. Jewa)<br>2. da t. Buny (J.
Jewa)<br>2. da t. Buny (J. Hanal V. J. B. S. S.<br>2. da t. Buny (J. Hanal V. J. B. S. S. S.<br>2. da t. Buny (J. Hanal V. Jewa)<br>2. da t. Buny (J. Hanal V. Jewa)   
  | 2440-025 0.55 0.55<br>2,440-025 4,474 (Jacob)<br>2,440-025 4,474 (Jacob)<br>2,440-025 4,474 (Jacob)<br>2,440-025 4,055 1,055<br>2,440-025 4,055 1,055<br>2,460-025 4,055 1,055 1,055<br>2,460-025 4,055 1  | 2 day on opti-S methylp bend (htymd) 4<br>2 - n Pentylp bend<br>2 - n Pentylp bend<br>3 - n Armeni<br>2 - n Pentylp bend<br>3 - n Pentylp bentylp bentylp bentylp bentylp bend<br>3 - n  | 2. Ethyl ≤ nethyl bend 8.8<br>3. Methyl & n burlyhenol 8.8<br>2. Methyl ≤ Stopro pri phenol ka vacrol) 8.8<br>8.8  
  | 2.4-Dita a pythe sil  | 2,5-14 met tyly benal<br>2,5-14 met tyly benal<br>2,5-14 met tyly benal  | 4 4 cert- Mary 2 -mer (M Be sal<br>4 4 cert- Mary 2 -mer (M Be sal<br>0.32 0.40<br>0.32 0.43  
  |
| (D)   | Status         Status<   
   
   | C (E)  | 100         121         1.1         1.2         1.2           2 cort         Annyl a training         2.5         2.5         2.5           2 cort         Mark (-1  
   
  | Image: Sector property is mention between the present of the mention between the present of the mention between the present of the mention of the me | 3.4 Distant any other and         3.4 Distant any other and         3.1 Distant any other   
  | Open III         Open IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII   
  | (F)  | 3 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -   
   | 2,4-di te 4,4m(4 pe es)<br>2,4-di te 4,4m(4 pe es)<br>2,4-di te 4,4m(4 pe es)<br>2,4-di te 4,4m(4 pe es)<br>0,001 0,011 0,012<br>0,001 0,012 0,012<br>0,001 0,001 0,012<br>0,001 0,012<br>0,001 0,012<br>0,001 0,012<br>0,001 0,012<br>0,001 0,012<br>0,001 0,001 0,001<br>0,001 0,001 0,001 0,001<br>0,001 0,001 0,001 0,001<br>0,001 0   | 2 400 pro pri - methyl piened   lihymed<br>2 - n Pennyl piened<br>2 - heryl ne eni<br>2 - heryl ne eni<br>2 - heryl ne eni<br>2 - heryl ne eni<br>2 - heryl ne eni   
   | 2-Ethyl-5-methyl plenol 2 2 2 2<br>3-Methyl-5-n burlyl phenol 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2   
   | 2.4 bits a range of the set   | 2,5-16 not by benefit  | 4 to 1: bay2.motV/be bi<br>4 to 1: bay2.motV/be bi<br>0.32 0.40<br>0.32 0.45<br>0.52 0.45  |
| (D)   | COVACION         Sector Navy 2 weith j and         Sector Navy 2 weith j and         Sector Navy 2 weith j and           3 character Navy 2 weith j and         3 character Navy 2 weith j and         3 character Navy 2 weith j and         3 character Navy 2 weith j and           3 character Navy 2 weith j and         3 character Navy 2 weith j and         3 character Navy 2 weith j and         3 character Navy 2 weith j and           3 character Navy 2 weith j and         3 character Navy 2 weith j and         3 character Navy 2 weith j and         3 character Navy 2 weith j and           3 character Navy 2 weith j and         3 character Navy   
   
  | E de (VE) (E)<br>2 de t 20/3 methylogine (<br>2 de t                       | 100         121         12         12         12         12         12           2  
   
   | Image: Section 2016   | 2         2.4         3.4         0.000 are myt Are mit         2.4         0.000 are myt Are mit           3         2.4         3.4         0.000 are myt Are mit         2.4         0.000 are myt Are mit           3         4.5         1.1         0.000 are myt Are mit         2.6         0.000 are myt Are mit           3         4.6         0.000 are myt Are mit           3         4.6         0.000 are myt Are mit           3         4.6         0.000 are myt Are myt Are mit         0.000 are myt Are mit         0.000 are myt Are mit         0.000 are myt Are myt Are mit           3         4.6         0.000 are myt Are   
  | 2         3         4         4         4           2         4         6  
  | (F)  | 2,4,411 w. r. Juny J. Head<br>2,441 w. r. Juny J. Head<br>2,441 w. r. Juny J. Head<br>2,441 w. J. Mark Head<br>2,441 w. r. Juny J. Juny   
   | CON<br>2.4  
  | 2 - h Pentylpiend [hymd]<br>2 - h Pentylpiend<br>2 - h Ventylpiend<br>2 - h  | 2- (11/4)-5- methylphenol 2 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 2-1sop rop 4 pienol<br>2-1sop rop 4 pienol<br>022 022 023 023 0<br>023 023 023 0  
   | 2,5-time type real<br>2,5-time type  | 4 4 012 1.00<br>4 4 012 MAY 2 - He thy Le HI<br>0 32 0.40<br>0 32 0.45<br>0 34<br>0 35 0 31  |
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  | 2         3         4         4         4           2         4         6         6         6           2         4         6         7         10         6           2         4         6         7         10         10           2         4         6         6         10         10           2         4         6         6         10         10           2         4         6         6         10         10           2         4         6         6         10         10           2         5         6         6         10         10         10           1         6         6         10         10         10         10         10           1         1         6         10         10         10         10         10           1         1         10         10         10         10         10         10           1         1         10         10         10         10         10         10           1         10         10         10         10         10         10 <td>(F)</td> <td>2,4,415 pr. Lanyy) keesal<br/>2 tari: hay 4 aren yi keesal<br/>3 tari: h</td> <td>2 4 4 50 4 6 4 4 4 5 4 5 4 4 5 4 5 4 5 4 5 4 5 4</td> <td>2010 100 pro pri 4 mental plend (hyperd)<br/>2 m Pental plend (hyperd)<br/>2 m Pe</td> <td>2-Methyl-Stoppo pylphenol 23 0 22 22 22 22 22 22 22 22 22 22 22 22 2</td> <td>2.4 4 151 0 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>31         G21         G21         G21           2, G. Its not V(J period)         2, G. Its not V(J period)         G21         G21           3, S. Its not V(J period)         G21         G21         G21           3, S. Its not V(J period)         G22         G22         G23           3, S. Its not V(J period)         G23         G23         G23           3, S. Its not V(J period)         G23         G23         G23         G23           3, S. Its not V(J period)         G23         G23         G24         G23           3, S. Its not V(J period)         G23         G23         G24         G23           3, S. Its not V(J period)         G23         G24         G24         G24           3, S. Its not V(J period)         G23         G24         G24         G24           3, S. Its not V(J period)         G23         G24         G24         G24           3, G3         G35         G35         G35         G35         G36</td> <td>4 cor, bay 2 - so the ball<br/>4 cor, bay 2 - so the ball<br/>4 cor, bay 2 - so the ball<br/>6 cor core core core core core core core</td>   
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| (D)   | COUNT         COUNT <th< td=""><td>E de (VER) 201<br/>(E)<br/>2 or 5 Ar (3 - sech) jórcal<br/>2 or 5 Ar (4 - sech) jór</td><td>100         120         120         120         120         120         120           2</td><td>Image: Second second</td><td>J. Mark 199         J. Mark 199         <thj. 199<="" mark="" th=""> <thj. 199<="" mark="" th=""></thj.></thj.></td><td>Add         Add         Add         Add           2, 0         1         3         3         4         2           2, 0         1         4         4         4         1           2, 0         1         4         1         1         1           2, 0         1         4         1         1         1           2, 0         1         1         1         1         1           2, 0         1         1         1         1         1           2, 0         1         1         1         1         1           2, 0         1         1         1         1         1         1           2, 0         1</td><td>(F)<br/>Establisherstyleters<br/>Establisherstyleters<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Establisherst<br/>Es</td><td>2, 4, 4 to g , 4 marky (kern)<br/>2, 2 d , 4 marky (kern)<br/>2, 3 d , 4 marky (kern)<br/>2, 3 d , 4 marky (kern)<br/>2, 4 d , 4 marky (kern)<br/>3, 4 d , 4 marky (kern)<br/>4, 4 marky (kern)<br/>4,</td><td>2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>2 277<br/>2 77<br/>2 77</td><td>2. Hrthpl≤, methylphenol         45         9<!--</td--><td>2-1-100 F100 F 010 F 010</td><td>11         Cli 1         Cl</td><td>4 core havy 3 monthly be all     4 core havy 3 monthly be all     4 core havy 4 monthly be all     0.32 0.40     0.32 0.45     0.45
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Ope         Date         Date         Date         Date           3, 5, 6, 10, 10, 20, 20, 20, 20, 20, 20, 20, 20, 20, 2  |
(F)<br>2-tot&u/-3-ms/ubters1<br>2-tot&u/-4-ms/ubters1<br>2-tot&u/-4-ms/ubters1<br>2-tot&u/-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1<br>2-tot&u-4-bits1                                    | 2 or t. buylthead         2 or t. buylthead           2 or t. buylthead         2 or t. buylthead <td>2 de la casa de la cas</td> <td>2010 100 171 4<br/>2017 1<br/>2017 1</td> <td>2. Arethyl-Sticopio pri phenol – 2. Arethyl-Sticopio phenol – 2. Arethyl-Stic</td> <td>2-1500 rop 4 bits a bit</td> <td>3</td> <td>4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td> | 2 de la casa de la cas   | 2010 100 171 4<br>2017 1<br>2017 1   | 2. Arethyl-Sticopio pri phenol – 2. Arethyl-Sticopio phenol – 2. Arethyl-Stic   
                                | 2-1500 rop 4 bits a bit  | 3  | 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4  |
| (D)<br>List: 84-5-echipterel<br>Dist-84-5-echipterel<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-brend<br>Dist-84-bre | A function for a point of a constraint   
   
  | C C C C C C C C C C C C C C C C C C C  | 1         1         1         1         1           2         0         0         0         0         0         0           2         0   
   
   | Image: Section of the sectio | Jean         Jean         Jean         Jean           Jean         Jean         Jean         Jean         Jean         Jean           Jean         Jean         Jean         Jean         Jean         Jean         Jean           Jean         Jean         Jean         Jean         Jean         Jean         Jean         Jean         Jean           Jean  
  | Operation         Operation <t< td=""><td>(F)<br/>2 crt3.0/15-mcNyletmal<br/>2 crt3.0/15-mcNyletmal<br/>2 crt3.0/16-mcNyletmal<br/>2 crt3.0/16-mal<br/>2 crt3.0/15-mal<br/>2 crt3.0/15-ma</td><td>2 Juli Li Lung J         2 Juli Li Lung J           2 Juli Li Lung J</td><td>2</td><td>2010         2010        
2010         <td< td=""><td>2. Herly S- stoppo pri phenol Sa ratcol) 021 022 022 022 022 022 022 022 022 022</td><td>2 - 2 - 4 - 5 - 2 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2</td><td>3/6.1 Corr Corr Corr Corr Corr Corr Corr Cor</td><td>4 core bary's nettyphenol<br/>4 core bary's nettyphenol<br/>0 32 0 4 core<br/>0 32 0 5 core<br/>0 32 0 core<br/>0 co</td></td<></td></t<> | (F)<br>2 crt3.0/15-mcNyletmal<br>2 crt3.0/15-mcNyletmal<br>2 crt3.0/16-mcNyletmal<br>2 crt3.0/16-mal<br>2 crt3.0/15-mal<br>2 crt3.0/15-ma                                   | 2 Juli Li Lung J         2 Juli Li Lung J           2 Juli Li Lung J  
   | 2  | 2010         2010 <td< td=""><td>2. Herly S- stoppo pri phenol Sa ratcol) 021 022 022 022 022 022 022 022 022 022</td><td>2 - 2 - 4 - 5 - 2 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2</td><td>3/6.1 Corr Corr Corr Corr Corr Corr Corr Cor</td><td>4 core bary's nettyphenol<br/>4 core bary's nettyphenol<br/>0 32 0 4 core<br/>0 32 0 5 core<br/>0 32 0 core<br/>0 co</td></td<> | 2. Herly S- stoppo pri phenol Sa ratcol) 021 022 022 022 022 022 022 022 022 022  
   | 2 - 2 - 4 - 5 - 2 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2   | 3/6.1 Corr Corr Corr Corr Corr Corr Corr Cor   | 4 core bary's nettyphenol<br>4 core bary's nettyphenol<br>0 32 0 4 core<br>0 32 0 5 core<br>0 32 0 core<br>0 co |
| (D)   | A cont hory > herity iteration         A cont  
   
   | Electrologia<br>(E)<br>Sec Aul A-reflytherel<br>Sec Aul A-reflytherel   | 1         2         1         2         1         1           2         2         2         2         2         1         1           2   
   
   | Image: Section of the sectio | 3.4         Bit is a second secon  
  | Ope         A         A         A         A           J         J         J         J         J         A         A           J         J         J         J         A         A         A         A           J         J         J         A  
  | (F)<br>> 5053/01/5-motivitienel<br>> 5054201/4-motivitienel<br>> 5054201/4-motivitienel<br>> 5054201/4-motivitienel<br>> 5054201/401<br>> 5054201<br>> 5054201<br>> 5054201<br>> 5054201<br>> 5054201<br>> 50542   | 2, da - tra e, buryi kwadi<br>2, ea - tra e, buryi  
   | 2 dec favor favor favor<br>2 dec favor favor favor<br>2 dec favor favor favor<br>2 dec favor favor<br>2 dec favor favor<br>2 dec favor favor<br>2 dec favor | 2 100 100 171 (<br>2 100 100 171 (<br>2 100 100 171 (<br>2 10 100 17   | 2. Methyl 5: methyl hendl         4 <td>244 040 0<br/>244 040 0 0<br/>244 040 0 0<br/>244 040 0 0<br/>244 040 0 0<br/>255 0<br/>25</td> <td>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl-beed<br/>2,5-timethyl</td> <td>4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td>   
  | 244 040 0<br>244 040 0 0<br>244 040 0 0<br>244 040 0 0<br>244 040 0 0<br>255 0<br>25  | 2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl-beed<br>2,5-timethyl  | 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4  |
| (D)<br>Andredus - Antongeneral<br>(D)<br>Anton Santhalance<br>Anton Santhalanc  | And Control Marky - Marky Parent         And Control Marky - Marky   
   
  | 2-bit (Ard Sector) plane (<br>2-bit Sub) 4-methylphen (<br>3-methylphen (<br>3-me | 100         120         120         120         120         120         120           V or t         V or t <td>Image: Section of the sectio</td> <td>A         Main III         Main IIII         Main IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII</td> <td>2         3         3         3         4         6         4         4         4         6         6         4         1         4         4         6         6         6         1         1         4         6         6         6         1         1         1         6         6         6         1         1         1         6         6         1</td> <td>(F)<br/>2 tot 6.0,15 mol/yhenal<br/>2 tot 6.0,14 mol/yhenal<br/>2 tot 6.0,14 mol/yhenal<br/>2 tot 6.0,14 mol/yhenal<br/>2 tot 6.0,14 mol<br/>2 tot 6.0,14 mo</td> <td>24         24&lt;</td> <td>2 U U U U U U U U U U U U U U U U U U U</td> <td>2010         2017         471           2017         2017         2017      &lt;</td> <td>J. Huyl 5-stopped particular in the provided in the pro</td> <td>2 - 1 sop roty 4 - ten o<br/>2 - 1 sop roty 4 -</td> <td>31         Corr         Corr         Corr           3.4         Corr         Corr         Corr           3.5         Fine e buy) the col         Corr         Corr           3.5         Fine e by) the col         Corr         Corr           4.4         Corr         Corr         Corr           5.4         Corr         Corr         Corr           4.4         Corr         Corr         Corr  <!--</td--><td>4 cort May 2 are 4/ are a bury 2 are 4/ are 4/ are a bury 2 are 4/ are</td></td>   | Image: Section of the sectio | A         Main III         Main IIII         Main IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII   
   
   | 2         3         3         3         4         6         4         4         4         6         6         4         1         4         4         6         6         6         1         1         4         6         6         6         1         1         1         6         6         6         1         1         1         6         6         1   
   | (F)<br>2 tot 6.0,15 mol/yhenal<br>2 tot 6.0,14 mol/yhenal<br>2 tot 6.0,14 mol/yhenal<br>2 tot 6.0,14 mol/yhenal<br>2 tot 6.0,14 mol<br>2 tot 6.0,14 mo   | 24         24<   
  | 2 U U U U U U U U U U U U U U U U U U U  | 2010         2017         471           2017         2017         2017      <  | J. Huyl 5-stopped particular in the provided in the pro  
  | 2 - 1 sop roty 4 - ten o<br>2 - 1 sop roty 4 -  | 31         Corr         Corr         Corr           3.4         Corr         Corr         Corr           3.5         Fine e buy) the col         Corr         Corr           3.5         Fine e by) the col         Corr         Corr           4.4         Corr         Corr         Corr           5.4         Corr         Corr         Corr           4.4         Corr         Corr         Corr </td <td>4 cort May 2 are 4/ are a bury 2 are 4/ are 4/ are a bury 2 are 4/ are</td> | 4 cort May 2 are 4/ are a bury 2 are 4/ are 4/ are a bury 2 are 4/ are  |
| (D)   | A real barry y and   
   
  | E de (APR) 201<br>E de (APR) 201<br>2 de 12 de (APR) 2 de la companya  | 100         100 <td>Control         Sector         Sector         Sector           Control         2</td> <td>J.M.         J. I.M.         J.M.         <thj.m.< th=""> <thj.m.< th=""> <thj.m.< th=""> <th< td=""><td>2         3         4         3         4</td><td>(F)<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-md<br/>2 tot 8//</td><td>2, ct. du cr. hurpf) trend<br/>2, 2 ct. hurpf, t</td><td>2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>2</td><td>2. Merityl-Sitopropri plenol 12 #44000 011 012 012 012 012 012 012 012 012</td><td>2-10 - 2-20<br/>2-100 prop 4 p km<br/>- 2-20<br/>- 2-20</td><td>2,5-timet by hered<br/>2,5-timet by hered<br/>2,5-timet by hered<br/>110 020 031 021<br/>110 020 031 031<br/>110 020 031 031<br/>110 020 031 031<br/>110 020 030<br/>110 020</td><td>4 4 cort far y 2 met W ite all<br/>4 4 cort far y 2 met W ite all<br/>4 4 cort far y 2 met W ite all<br/>6 0.01 0.02 0.00<br/>0 0.02 0.02<br/>0 0.02 0</td></th<></thj.m.<></thj.m.<></thj.m.<></td>   | Control         Sector         Sector         Sector           Control         2  
   | J.M.         J. I.M.         J.M.         J.M. <thj.m.< th=""> <thj.m.< th=""> <thj.m.< th=""> <th< td=""><td>2         3         4         3         4</td><td>(F)<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-mdV/planal<br/>2 tot 8//14-md<br/>2 tot 8//</td><td>2, ct. du cr. hurpf) trend<br/>2, 2 ct. hurpf, t</td><td>2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>2</td><td>2. Merityl-Sitopropri plenol 12 #44000 011 012 012 012 012 012 012 012 012</td><td>2-10 - 2-20<br/>2-100 prop 4 p km<br/>- 2-20<br/>- 2-20</td><td>2,5-timet by hered<br/>2,5-timet by hered<br/>2,5-timet by hered<br/>110 020 031 021<br/>110 020 031 031<br/>110 020 031 031<br/>110 020 031 031<br/>110 020 030<br/>110 020</td><td>4 4 cort far y 2 met W ite all<br/>4 4 cort far y 2 met W ite all<br/>4 4 cort far y 2 met W ite all<br/>6 0.01 0.02 0.00<br/>0 0.02 0.02<br/>0 0.02 0</td></th<></thj.m.<></thj.m.<></thj.m.<> | 2         3         4         3         4   
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  | E La (-K-1) 201<br>(E)<br>2 La C 20/ 3 - m2h/phrai<br>2 La C 20/ 4 - m2h/phrai<br>2 - a C 20/ 4 - m2h/phrai<br>2 - d                     | 1         2         4         1         2         4         1         2           2         0   
   |   
   | J.M.         J.M. <thj.m.< th="">         J.M.         J.M.         <thj< td=""><td>2         3         3         4</td><td>(F)</td><td>2         2         4         4         4         10         1</td><td>2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4</td><td>2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</td><td>2. (11)         <t< td=""><td>1         2         2         2           1         2         2         2           1         2         2         2           1         2         2         2           1         1         1         1           1         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2         2           2         2         2         2         2         2         2           2</td><td>31 C11 C12 C12<br/>3,4-C11mCV(A)erol<br/>3,4-C11mCV(A)erol<br/>2,4-C11mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)ero</td><td>4 cont 5 100<br/>4 cont 5 100<br/>1 cont 5 100<br/>1</td></t<></td></thj<></thj.m.<>   
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   | 2. (11)         2. (11) <t< td=""><td>1         2         2         2           1         2         2         2           1         2         2         2           1         2         2         2           1         1         1         1           1         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2         2           2         2         2         2         2         2         2           2</td><td>31 C11 C12 C12<br/>3,4-C11mCV(A)erol<br/>3,4-C11mCV(A)erol<br/>2,4-C11mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)erol<br/>0,1-C12mCV(A)ero</td><td>4 cont 5 100<br/>4 cont 5 100<br/>1 cont 5 100<br/>1</td></t<> | 1         2         2         2           1         2         2         2           1         2         2         2           1         2         2         2           1         1         1         1           1         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2           2         2         2         2         2         2           2         2         2         2         2         2         2           2   | 31 C11 C12
C12<br>3,4-C11mCV(A)erol<br>3,4-C11mCV(A)erol<br>2,4-C11mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)erol<br>0,1-C12mCV(A)ero   | 4 cont 5 100<br>4 cont 5 100<br>1  |
| (D)   | A cont hory > herityi berni         A cont hory > herityi berni <t< td=""><td>E de (VER) 20<br/>E de (VER) 20<br/>E de Statut - Secolut Johnson<br/>2 de Statut - Secolut Johnson<br/>2</td><td>100         100         100         100         100         100           2 or t         A drift         D or t         A drift         D or t         D or t           2 or t         A drift         D or t         A drift         D or t         D or t           2 or t         A drift         D or t         D or t         D or t         D or t           2 or t         A drift         D or t         D or t         D or t         D or t           2 or t         A drift         D or t         D or t         D or t         D or t           2 or t         A drift         D or t         <td< td=""><td>Image: Section of the sectio</td><td>A         A         Description         <thdescription< th=""></thdescription<></td><td>2         3         3         3         4           2         3         3         4         2         4           2         4         1         3         4         2         4           2         4         1         4         1         1         4         1         1           2         4         1         1         4         1</td><td>(F)</td><td>2, cs. tr. or. s. bury() hered<br/>2, cs. tr. bur</td><td>2 2 cor here have have an average of the set of the set</td><td>1         2         0</td><td>2. [114/5 methy bend 24 22] 3. Methy 6 - h unit gibend 24 22 3. Me</td><td>1-1-00 rop-1-1-00 rop-1-00 r</td><td>3, - Line types of the second second</td><td>4 cc t t t t t t t t t t t t t t t t t t</td></td<></td></t<>  
                                      | E de (VER) 20<br>E de (VER) 20<br>E de Statut - Secolut Johnson<br>2   | 100         100         100         100         100         100           2 or t         A drift         D or t         A drift         D or t         D or t           2 or t         A drift         D or t         A drift         D or t         D or t           2 or t         A drift         D or t         D or t         D or t         D or t           2 or t         A drift         D or t         D or t         D or t         D or t           2 or t         A drift         D or t         D or t         D or t         D or t           2 or t         A drift         D or t         D or t <td< td=""><td>Image: Section of the sectio</td><td>A         A         Description         <thdescription< th=""></thdescription<></td><td>2         3         3         3         4           2         3         3         4         2         4           2         4         1         3         4         2         4           2         4         1         4         1         1         4         1         1           2         4         1         1         4         1</td><td>(F)</td><td>2, cs. tr. or. s. bury() hered<br/>2, cs. tr. bur</td><td>2 2 cor here have have an average of the set of the set</td><td>1         2         0</td><td>2. [114/5 methy bend 24 22] 3. Methy 6 - h unit gibend 24 22 3. Me</td><td>1-1-00 rop-1-1-00 rop-1-00 r</td><td>3, - Line types of the second second</td><td>4 cc t t t t t t t t t t t t t t t t t t</td></td<> | Image: Section of the sectio | A         A         Description         Description <thdescription< th=""></thdescription<>   
  | 2         3         3         3         4           2         3         3         4         2         4           2         4         1         3         4         2         4           2         4         1         4         1         1         4         1         1           2         4         1         1         4         1      
  1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1   | (F)  
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0            | 2. [114/5 methy bend 24 22] 3. Methy 6 - h unit gibend 24 22 3. Me  
   | 1-1-00 rop-1-1-00 rop-1-00 r  | 3, - Line types of the second  | 4 cc t t t t t t t t t t t t t t t t t t   |

## Figure 4

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   |   | _ C0  | KMA.   | 6  
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(A)	1-Pentanol	1- Hexanol	1- Heptanol	1- O ctanol	1- Nonanol
  | 1 Decemol  | 1- Undecanol  | 1-Dodecanol   | 1- Tridecanol  | 2- Methyl-1- butan ol  | 3 Methyl-1- butanol  | 3- Methyl-1-pentanol   | 2-EthyF1-butanoi    | O Distant 4 - Automot   
   | 6- Methyl-1-heptanol   | 2-Ethylhexanol  | 3,5,5- Trimethyl-1- hecan ol   | 2-Propylhe pantan-1-ol  | 3,7- Dimethyl-1-o danol  | 2-Methyl-1- unde ca nol  | (E  
   | 3)  |  | 1-P entanol  | 1- Hexanol   | 1-Heptanol   
  | 1-Octanol  | 1- No nano I  | 1-Decanol  | 1- Undecanol   
   | 1-Dodecanol   | 1- Tridecanol   | 2- Methyl-1- butan ol  | 3- Methyl-1- butan ol  
   | 3- Methyl-1-pentanol  | 2-Ethyl-1-butanol  | 6- Methyl-1-heptanol  | 2-Ethylhexanol   | 3,5,5- Trimethyl-1-hexanol  
  | 2-Propylhepantan-1-ol   | 3,7- Dimethyl-1-octanol   | 2-Methyl-1- unde canol  | (C)                         | 1- Pentanol  | 1-Hexanol   | 1-Heptanol   | 1- Octanol   | 1-Nonanol  | 1- De canol   | 1-Undecan ol   
  | 1- Dodecanol   | 1- Tridecan ol   | 2 Methyl-1 butanol   | 3-Methyl-1-butanol  | 3- Methyl- 1- pentanol  | 2- Ethyl 1- butanol   
  | 6-Methyl- 1-heptanol   | 2. Ethylbeyand  | 2-Propylhepantan-1-ol  | 3,7-Dimethyl-1- octanol  
   | 2-Methyl-1- und ecanol  |
| 1 Period  | 100.00   | e. 0   | 175  | 0.70   | 0.69  | 0.04   
  | 50   | 0.69  | 0.69  | 0.69   | 0.91   | 0.01   | 100  | 1 01                | an n  
   | 75 0   | 70 0  | 178  | 0.70  | 0.70   | 0.69   |   
   | 1 Paniami   |  | 10   | 1 0.95   | 0.95   
  | 0.05   | 0.05  | 0.05   | 0.05   
   | 0.95  | a 0.0   | 1.62   | 0.69   
   | ee 0  | 58 0   | 191 0   |  | 0.77  
  | n en  | 0.74  | 0.9.0   | 1-Pentann I                 | 1.00   | 0.85  | 0.76   | 0.72   | 0.70   | 0.70  | 0.70   
  | 0.70   | 0.07   | 0.82   | 0.82  | 1.00  | 089.0   
  | 76 0   | 81 0.8  | 0.77   | 2 0 72   
   | 0.70  |
| 1.Hevand  | 084 1  | 00 0   | 190  | 0.84   | 0.82  | 0.0  
  | 82 1   | 0.82  | 0.82  | 0.82   | 0.68   | 0.68   | 0.84   |                     | 76 0  
   | 90.0   | 95 0  | 195 (  | 0.94  | 0.84   | 0.82   |   
   | 1. Heyomi   |  | 0.9  | 1.00   | 1.00   
  | 1.00   | 1 1 00  | 100  | 1.00   
   | 1.00  | 1.00  | 0.60   | 0.65   
   | 84 0  | 55 0   | 185 0   | 84   | 074   
  | 0.84  | 0.78  | 084   | 1-Hexanol                   | 0.85   | 1.00  | 0.88   | 0.83   | 0.81   | 0.81  | 0.81   
  | 0.81   | 1 0.81   | 0.70   | 0.70  | 0.85  | 077 0   
  | 188 0  | 94 0.9  | 5 0.83   | 3 0.83   
   | 0.81  |
| 1 Havioral  | 0.75 0   | on 1   | 00   | 0.02   | 0.01  |  
  |  | 0.01  | 0.01  | 0.01   | 0.61   | 0.61   | 0.75   |                     | AG 1  
   | 00.0   | 05 1  | 1 05 1   | 0.02  | 0.00   | 0.01   |   
   | 1. Honiard  | 1  | 0.0  | 1.00   | 1.00   
  | 1.00   | 1.00  | 100  | 1.00   
   | 1.00  | 1.00  | 0.60   | 0.65   
   | a 1   | 56 0   | 185 0   | 0  | 0.74  
  | 0.04  | 0.79  | 084   | 1-Heptanol                  | 0.76   | 0.88  | 1.00   | 0.94   | 0.93   | 0.93  | 0.93   
  | 0.93   | 3 0.93   | 0.62   | 0.62  | 0.76  | 0.68  
  | 00 0   | 94 0.8  | 4 0.94   | 4 0.94   
   | 0.93  |
| 1.0dam  | 0.70 0   | en 1   | 102  | 100  | 0.00  |  
  |  | 0.02  | 0.00  | 0.00   | 0.57   | 057  | 0.70   |                     | 64 A  
   | 02 0   | 00 1  |  | 0.05  | 1.00   | 0.00   |   
   | 1.Octand  |  | 0.0  | 1.00   | 1.00   
  | 1.00   | 1.00  | 100  | 1.00   
   | 1.00  | 1.00  | 0.60   | 0.65   
   | a 1   | 56 0   | 185 0   | 0  | 0.74  
  | 0.04  | 0.79  | 084   | 1- Octa nol                 | 0.72   | 0.83  | 0.94   | 1.00   | 0.98   | 0.98  | 0.98   
  | 0.96   | 8 0.96   | 8 0.58   | 0.58  | 0.72  | 0.64  
  | 194 0  | 89 0.7  | 9 0.96   | 5 1.00   
   | 0.98  |
| 1-Norarol   | 0.69 01  | 82 0   | 191  | 0.98   | 100   | 10   
  | 00   | 100   | 100   | 100  | 0.56   | 0.56   | 0.69   |                     | 62 Q  
   | 91 0   | 87 0  | 1.78 (   | 0.98  | 0.98   | 1.00   |   
   | 1-Norami  |  | 0.9  | 1.00   | 1.00   
  | 1.00   | 1.00  | 100  | 100  
   | 1.00  | 1.00  | 0.60   | 0.65   
   | 84 0  | 56 0   | 185 0   | 184  | 0.74  
  | 0.84  | 0.78  | 0.84  | 1-Nonano I                  | 0.70   | 0.81  | 0.93   | 0.98   | 1.00   | 1.00  | 1.00   
  | 1.00   | 0 1.00   | 0.57   | 0.57  | 0.70  | 063 0   
  | 1.93 0   | 87 0.7  | 8 0.98   | 8 0.98   
   | 100   |
| 1-Decami  | 0.69 01  | 82 0   | 191  | 0.98   | 100   | 10   
  |  | 100   | 100   | 100  | 0.56   | 0.56   | 0.69   |                     | 62 Q  
   | 91 0   | 87 0  | 178 (  | 0.98  | 0.98   | 1.00   |   
   | 1-Decard  |  | 0.9  | 1.00   | 1.00   
  | 1.00   | 1.00  | 100  | 1.00   
   | 1.00  | 1.00  | 0.60   | 0.65   
   | 84 0  | 56 0   | 185 0   | 184  | 0.74  
  | 0.84  | 0.78  | 0.84  | 1-Decanol                   | 0.70   | 0.81  | 0.93   | 0.98   | 1.00   | 1.00  | 1.00   
  | 1.00   | 0 1.00   | 0.57   | 0.57  | 0.70  | 063 0   
  | 1.93 0   | 87 0.7  | 8 0.98   | 8 0.98   
   | 100   |
| 1-Undecard  | 0.69 01  | 82 0   | 191  | 0.98   | 100   | 1 10   
  | 00   | 100   | 100   | 100  | 0.56   | 0.56   | 0.69   |                     | 62 Q.   
   | 91 0   | 87 0  | 1.78 (   | 0.98  | 0.98   | 1.00   |   
   | 1-Undecand  | sl.  | 0.9  | 1.00   | 1.00   
  | 1.00   | 1.00  | 100  | 1.00   
   | 1.00  | 1.00  | 0.60   | 0.65   
   | 84 0  | 56 0   | 185 0   | 184  | 0.74  
  | 0.84  | 0.78  | 0.84  | 1- Undecanol                | 0.70   | 0.81  | 0.93   | 0.98   | 1.00   | 1.00  | 1.00   
  | 1.00   | 0 1.00   | 0.57   | 0.57  | 0.70  | 063 0   
  | 1.93 0   | 87 0.7  | 8 0.98   | 8 0.98   
   | 100   |
| 1-Dodecand  | 0.69 01  | 82 0   | 191  | 0.98   | 100   | 11   
  | 00   | 100   | 100   | 100  | 0.56   | 0.56   | 0.69   | . 0.1               | 62 Q.   
   | 91 0   | 87 0  | 1.78 (   | 0.98  | 0.98   | 1.00   |   
   | 1-Dodecard  | ol l   | 0.9  | 5 1.00   | 1.00   
  | 1.00   | 1.00  | 100  | 1.00   
   | 1.00  | 1.00  | 0.60   | 0.65   
   | 84 0  | 56 0   | 185 0   | 1.84   | 0.74  
  | 0.84  | 0.78  | 0.84  | 1- Do decanol               | 0.70   | 0.81  | 0.93   | 0.98   | 1.00   | 1.00  | 1.00   
  | 1.00   | 0 1.00   | 0.57   | 0.57  | 0.70  | 063 (   
  | 1.93 0   | 87 0.7  | 8 0.96   | 8 0.98   
   | 100   |
| 1-Tridecanol  | 0.69 0.  | 82 0   | 191  | 86.0   | 100   | 1 10   
  | 00 :   | 100   | 100   | 100  | 0.56   | 0.56   | 0.69   | 9 Q.I               | 62 0.   
   | 91 0   | 87 0  | 1.78 (   | 0.98  | 0.98   | 1.00   |   
   | 1-Tridecand   | ol   | 0.9  | 5 1.00   | 1.00   
  | 1.00   | 1.00  | 100  | 1.00   
   | 1.00  | 1.00  | 0.60   | 0.65   
   | .84 0   | 56 0   | 185 0   | 184  | 0.74  
  | 0.84  | 0.78  | 0.84  | 1-Tridecanol                | 0.70   | 0.81  | 0.93   | 0.98   | 1.00   | 1.00  | 1.00   
  | 1.00   | 0 1.00   | 0.57   | 0.57  | 0.70  | 0.63  
  | 1.93 0   | 87 0.7  | 8 0.96   | 8 0.98   
   | 100   |
| 2-Methyl-1-butanol  | 0.81 0   | 68 0   | 161  | 0.57   | 0.56  | i 0.5  
  | 56   | 0.56  | 0.56  | 0.56   | 100  | 100  | 0.81   | 1 0.1               | 89 0.   
   | 61 0   | 64 (  | 1.71 (   | 0.57  | 0.57   | 0.56   | 21  
   | Nethyl-1-but  | anol   | 0.6  | 0.60   | 0.60   
  | 0.60   | 0.60  | 0.60   | 0.60   
   | 0.60  | 0.60  | 1.00   | 0.68   
   | .67 0   | .94 0  | 162 0   | L74  | 0.58  
  | 0.74  | 0.56  | 0.74  | 2- Methyl-1-but and         | 0.82   | 0.70  | 0.62   | 0.58   | 0.57   | 0.57  | 0.57   
  | 0.57   | 7 0.57   | 7 1.00   | 1.00  | 0.82  | 091   
  | 1.62 0   | 66 0.7  | 4 0.58   | 8 0.58   
   | 0.57  |
| 3-Methyl-1-butanol  | 0.81 0   | 68 0   | 161  | 0.57   | 0.56  | 5 0.5  
  | 56   | 0.56  | 0.56  | 0.56   | 100  | 100  | 0.81   | 0.1                 | 89 <mark>0</mark> .   
   | 61 0   | 64 0  | 1.71 (   | 0.57  | 0.57   | 0.56   | 31  
   | Nethyl-1-but  | anol   | 0.6  | 8 0.65   | 0.65   
  | 0.65   | 0.65  | 0.65   | 0.65   
   | 0.65  | 0.65  | 0.68   | 100  
   | 79 0  | 64 0   | 180 0   | 1.65   | 0.83  
  | 0.65  | 0.80  | 0.65  | 3- Methyl-1-but and         | 0.82   | 0.70  | 0.62   | 0.58   | 0.57   | 0.57  | 0.57   
  | 0.57   | 7 0.57   | 7 1.00   | 1.00  | 0.82  | 091   
  | 1.62 0   | 66 0.7  | 4 0.58   | 8 0.58   
   | 0.57  |
| 3-Methyl-1-pertanol   | 100 0  | 84 0   | 176  | 0.70   | 0.69  | 0.6  
  | 69 I   | 0.69  | 0.69  | 0.69   | 0.81   | 0.81   | 1.00   | 0.9                 | 90 O.   
   | 76 0   | .79 (   | 1.78   | 0.70  | 0.70   | 0.69   | 3-1V  
   | lethyl-1-pen  | tanol  | 0.8  | 8 0.84   | 0.84   
  | 0.84   | 0.84  | 0.84   | 0.84   
   | 0.84  | 0.84  | 0.67   | 0.79   
   | .00 0   | 63 0   | 185 0   | 1.84   | 88.0  
  | 0.84  | 0.85  | 0.84  | 3- Methyl-1-pentanol        | 1.00   | 0.85  | 0.76   | 0.72   | 0.70   | 0.70  | 0.70   
  | 0.70   | 0.70   | 0.82   | 0.82  | 1.00  | 0.89 (  
  | 1.76 0   | 81 0.8  | 2 0.72   | 2 0.72   
   | 0.70  |
| 2-Ethyl-1-butanol   | 0.90 0.  | 76 0   | 168  | 0.64   | 0.62  | 2 0.6  
  | 52   | 0.62  | 0.62  | 0.62   | 0.89   | 0.89   | 0.90   | 1 1 1               | 00 <mark>0</mark> .   
   | 68 0   | .72 (   | 1.80 (   | 0.64  | 0.64   | 0.62   | 2-  
   | Ehyl-1-buts   | and  | 05   | 0.56   | 0.56   
  | 0.56   | 0.56  | 0.56   | 0.56   
   | 0.56  | 0.56  | 0.94   | 0.64   
   | 63 1  | .00 0  | 158 0   | 1.70   | 054   
  | 0.70  | 0.52  | 0.70  | 2-Ethyl-1-butan ol          | 0.89   | 0.77  | 0.68   | 0.64   | 0.63   | 0.63  | 0.63   
  | 0.63   | 3 0.63   | 3 0.91   | 0.91  | 0.89  | 100   
  | 1.68 0   | 72 0.8  | 1 0.64   | 4 0.64   
   | 0.63  |
| 6-Methyl-1-heptanol   | 0.76 0.  | 90 1   | 00   | 0.93   | 0.91  | 0.9  
  | 91   | 0.91  | 0.91  | 0.91   | 0.61   | 0.61   | 0.76   | 5 <mark>0.1</mark>  | 68 1  
   | 00 0   | .95 (   | 1.85 (   | 0.93  | 0.93   | 0.91   | 6-N   
   | lethyl+1-hep  | tarol  | 0.8  | 0.85   | 0.85   
  | 0.85   | 0.85  | 0.85   | 0.85   
   | 0.85  | 0.85  | 0.62   | 0.80   
   | .85 0   | 58 1   | 100 0   | 185  | 0.88  
  | 0.85  | 0.92  | 0.85  | 6- Methyl-1-hep tanol       | 0.76   | 0.88  | 1.00   | 0.94   | 0.93   | 0.93  | 0.93   
  | 0.93   | 3 0.93   | 8 0.62   | 0.62  | 0.76  | 0.68  
  | .00 0  | 94 0.8  | 4 0.94   | 4 0.94   
   | 0.93  |
| 2-Bhylhexarol   | 0.79 0.5   | 95 0   | 195  | 0.89   | 0.87  | 0.0  
  | 87   | 0.87  | 0.87  | 0.87   | 0.64   | 0.64   | 0.79   | 9 <mark>0</mark> .  | 72 0.   
   | 95 1   | .00 0   | 1.90 (   | 0.89  | 0.89   | 0.87   | 1   
   | 2 Ethylhexan  | lor  | 0.8  | 0.84   | 0.84   
  | 0.84   | 0.84  | 0.84   | 0.84   
   | 0.84  | 0.84  | 0.74   | 0.65   
   | .84 0   | 70 0   | 185 1   | .00  | 0.74  
  | 1.00  | 0.78  | 100   | 2-Ethylhexanol              | 0.81   | 0.94  | 0.94   | 0.89   | 0.87   | 0.87  | 0.87   
  | 0.87   | 7 0.87   | 7 0.66   | 0.66  | 0.81  | 0.72  
  | 194 1  | 00 0.8  | 9 0.89   | 9 0.89   
   | 0.87  |
| 3,5,5-Trimethy I-1-hexanol  | 0.78 0.  | 95 0   | 1.85   | 0.80   | 0.78  | 0.   
  | 78   | 0.78  | 0.78  | 0.78   | 0.71   | 0.71   | 0.78   | 1 0.1               | 80 0.   
   | 85 0   | 90 1  | 1.00 (   | 0.80  | 0.80   | 0.78   | 3,5,5-  
   | Trimethyl-1-  | hexanol  | 0.7  | 0.74   | 0.74   
  | 0.74   | 0.74  | 0.74   | 0.74   
   | 0.74  | 0.74  | 0.58   | 0.83   
   | .88 0   | 54 0   | 188 0   | 174  | 100   
  | 0.74  | 0.96  | 0.74  | 3,5,5-Trimethyl-1-he xan ol | 0.82   | 0.95  | 0.84   | 0.79   | 0.78   | 0.78  | 0.78   
  | 0.7  | 8 0.76   | 0.74   | 0.74  | 0.82  | 0.81 0  
  | 184 0  | 89 10   | 0 0.79   | 9 0.79   
   | 0.78  |
| 2-Propylhepartan-1-ol   | 0.70 0.  | 84 0   | 193  | 0.96   | 0.98  | 0.9  
  | 98   | 0.98  | 0.98  | 0.98   | 0.57   | 0.57   | 0.70   | 0.0                 | 64 O.   
   | 93 0   | 89 0  | 1.80 1   | 1.00  | 0.96   | 0.98   | 2-Pi  
   | op/lhepanta   | an-1-d   | 0.8  | 0.84   | 0.84   
  | 0.84   | 0.84  | 0.84   | 0.84   
   | 0.84  | 0.84  | 0.74   | 0.65   
   | .84 0   | 170 0  | 185 1   | .00  | 0.74  
  | 1.00  | 0.78  | 100   | 2- Propylhe pantan-1-o l    | 0.72   | 0.02  | 0.94   | 0.96   | 0.98   | 0.96  | 0.98   
  | 1.96   | 8 0.98   | 6 U.56   | 0.58  | 0.72  | 064   
  | 194 0  | 89 U.7  | 9 100  | 0 0.96   
   | 0.00  |
| 3,7-Dirrethy H1-oct and   | 0.70 0.  | 84 0   | 193  | 100  | 0.98  | 0.9  
  | 98   | 0.98  | 0.98  | 0.98   | 0.57   | 0.57   | 0.70   | 0.0                 | 64 O.   
   | 93 0   | 89 0  | 1.80 (   | 0.96  | 1.00   | 0.98   | 3,7-0   
   | Dimethy I-1 o   | darol  | 0.7  | 0.78   | 0.78   
  | 0.78   | 0.78  | 0.78   | 0.78   
   | 0.78  | 0.78  | 0.56   | 0.80   
   | .85 0   | 52 0   | 192 0   | 1.78   | 0.96  
  | 0.78  | 1.00  | 0.78  | 3, /-Umethyl-1-octanol      | 0.72   | 0.04  | 0.94   | 1.00   | 0.98   | 0.96  | 0.98   
  | 1.96   | 8 U.90   | 0.58   | 0.58  | 0.72  | 064   
  | 194 0  | 89 U.A  | 9 096  | 5 1.00   
   | 0.96  |
|   |  | AD 4   | 101  | 0.98   | 1.00  | 1 10   
  | 00 :   | 100   | 1.00  | 1.00   | 0.56   | 0.56   | 0.69   | 0.0                 | 62 Q.   
   | 91 0   | 187 (   | 1.78 (   | 0.98  | 0.98   | 1.00   | 2-M   
   | ethy I-1- unde  | ecand  | 0.8  | 0.84   | 0.84   
  | 0.84   | 0.84  | 0.84   | 0.84   
   | 0.84  | 0.84  | 0.74   | 0.65   
   | .84 0   | 70 0   | 185 1   | .00  | 0.74  
  | 1.00  | 0.78  | 100   | 7- Meanly-1-rung etail di   | u nu   | 0.81  | 0.95   | 0.98   | 1.00   | 1 1 00  | 1 1.00   
  | 1 1 11   | u 10   | u usr  | 11.57   | u.n   | 003   
  | 199 0  | нг ш  | 8 0.98   | 6 U.96   
   | 100   |
2-Methy k1-undecand	0.69 0	M I							
  |  |   |   |  |  |  |  |                     |   
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  |  |   |  |  
   |   |
2-Methyl-1-undecand	0.69 01	ar u					
  |  | DK P  | 60 er   |  |  |  |  |                     |   
   |  |   |  |   |  |  |   
   |   |  |  |  |  
  |  |   | (  | DKFC   
   | ₽6  |   |  |  
   |   |  |   |  |   
  |   |   |   |                             |  |   |  |  |  |   | COK  
  | ECFR   | 4  |  |   |   |   
  |  |   |  |  
   | S   |
| (D)   | 1- Pentanol  | 1-Hexanol  | 1-Heptanol   | 1-0 dand   | 1-Nonanol   |  
  | 1-Decanol  | 1-Undecanol   | 1- Dodecanol  | 1-Tridecanol   | 2-Methyl-1-butanol   | 3-Methyl-1-butanol   | 3-Methyl-1-pentanol  | 2- Entyl- 1-butanot | 5. Ethod. 4. budenool   
   | 6-Methyl-1-heptanol  | 2- Ethylhexanol   | 3,5,5-Trimethyl-1-hexanol  | 2- Propyhepantan- 1-ol  | 3,7-Dimethyl-1-octanol   | 2-Methyl-1-undecanol   | (E  
   | )   |  | 1- Pentanol  | 1-Hexanol  | 1 Hontanol   
  | 1-Octanol  | 1-Nonanol   | 1-Decanol  | 1-Undecanol  
   | t- Dodecanol  | 1. Tridecami  | 2-Methyl-1-butanol   | 3-Methyl-1-butanol   
   |   | o loter i formation  | 6-Methyl-1-hentanol   | 2. Phydhexanol   | 3,5,5-Trimethyl-1-hexanol   
  | 2-Propyhepantan- 1-ol   | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undecanol  | (F)                         | 1-Pentanol   | 1-Hexanol   | 1-Heptanol   | 1-Octanol  | 1-Normol   | 1-Decanol   | E 1-Undecanol  
  | 1-Dodecanol  | 1-Tridecanol   | 2-Methyl-1-butand  | 3-Methyl-1-butand   | 3-Methyl-1-pentanol   | 2-Ethyl-1-butanol   
  | 6-Methyl-1-heptanol  | 3,5,5-Trimethy-1-hexanol  | 2-Propythepartan-1-ol  | 3,7-Dimethyl-1-octanol   
   | 2-Methyl-1-undecanol  |
| 2 Meth-H-undicanol  | 1- Pentanol  | 1-Hexanol  | 1-Heptanol   | 1-Octanol 0.75   | 1-Nonanol   | 5 0.   
  | 1-Decanol 75 0   | 1-Undecanol   | 1- Dodecanol  | 1-Tridecanol 25 6  | 2-Methyl-1-butanol   | 3-Methyl-1-butanol   | 3-Methyl-1-pentanol  | 2- Engi-1-buanoi    |   
   | 6-Methyl-1-heptanol 6 p  | 2-Ethylhexanol  | 3,5,5-Trimethyl-1-hexanol  | 2-Propyhepantan-1-ol  | 3,7-Dimethyl-1-octanol G 8   | 2-Methyl-1-undecanol   | (E  
   | )   |  | 1- Pertanol  | 1-Hexanol as a   | 1 Hentanol 19 0.   
  | 1-Octand 79 8  | 1-Nonanol   | (<br>1-Decanol   | 1-Undecanol  
   | 1- Dodecanol  | 1 Tridecapol  | 2-Methyl-1-butanol 9 8   | 3-Methyl-1-butanol 90  
   |   |  | 6-Method-1-hentanol   | 2. Phythexanol   | 3,5,5-Trimethyl-1-hexanol 8 5   
  | 2-Propyhepantan-1-ol 8 8  | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undecanol  | (F)                         | 1-Pentanol   | 1-Hexanol   | 1-Heptanol   | 1-Octanol  | 1-Noranol  | 1-Decanol   | Undecanol  
  | 1-Dodecanol  | 4-Tridecanol   | 2-Methyl-1-butand  | 3-Methyl-1-butand   | 3-Methyl-1-pentanol   | 2-Ethyl-1-butanol   
  | 6-Methyl-1-heptanol  | 3,5,5-Irmethy-1-hexanol   | 2-Propylheparitan-1-ol   | 3,7-Dimethyl-1-octanol   
   | 2-Methyl-1-undecanol  |
| 2 Methyl-undicanol  | 1.00 0.<br>0.91 1  | 1-Hexanol  | 1-Heptanol   | 1-Octanol 0.75   | 1-Nonanol   | 5 0.1  
  | 1-Decanol 75   | 1-Undecanol   | 1- Dodecanol  | 1-Tridecanol 0.75 02 0   | 2-Methyl-1-butanol   | 3-Methyl-1-butanol   | 3-Methyl-1-pentanol  |                     |   
   | 6-Methyl-1-heptanol 66 72 a  | 2-Ethylhexanol  | 3,5,5-Trimethyl-1-hexanol  | 2-Propythepartan-1-ol   | 3,7-Dimethyl-1-octand  | 2-Methyl-1-undecanol   | (E  
   | )   | 1  | 1- Pentanol  | 1-Hexanol 85 0.  | 1 Hentanol<br>79 0.  
  | 1-Octanol .79 0  | 1-Nonanol   | (<br>1-Decanol<br>79 0   | 1-Undecanol  
   | #6 1- Dodecanol .79 0   | 1. Tride carrol   | 2-Methyl-1-butanol 90 80   | 3-Methyl-1-butanol 99 4 9  
   |   |  | A Method 1 bentanol 59 0  | 2- Ethylhexanol 42 0   | 3,5,5-Trimethyl-1-hexanol 8888  
  | 2-Propyhepantan-1-ol 42 42  | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undecanol  | (F)                         | 1- Pentanol  | 1-Hexanol   | 1-Heptanol 52  | 1-Octanol  | 1-Noranol  | 1-Decanol<br>0.92   | 1-Undecanol  
  | 1- Dodecanol   | 4 1-Tridecanol   | 2-Methyl-1-butand  | 3-Methyl-1-butanol  | 3-Methyl-1-pentanol   | 2-Ethyl-1-butanol   
  | 6-Methyl-1-heptanol  | 3,5,5-Trimethy-1-nexanol  | 2-Propythepartan-1-ol  | 3,7-Dimethyl-1-octanol   
   | 2-Methyl-1-undecanol  |
| 2 Methyl-I-undicanol<br>(D)   | 1.00 0.<br>0.91 1<br>0.91 0.<br>0.91 1<br>0.91 0.  | 1-Hexanol<br>191 0<br>188 1  | 1-Heptanol   | 1-Octanol<br>0.75<br>0.82<br>0.93  | 1-Nonanol<br>0.75<br>0.82<br>0.93   | 5 0.1  
  | 1-Decanol 75   93   00   | 1-Undecanol<br>0.75<br>0.82<br>0.93   | 1- Dodecanol<br>0.75<br>0.82<br>0.93  | 1-Tridecanol<br>0.75<br>0.82<br>0.93   | 2-Methyl-1-butanol 0.73  | 3-Methyl-1-butanol   | 3-Methyl-1-pentanol  |                     | 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
   | 6-Methyl-1-heptanol  | 2-Ethylhexanol  | 3,5,5-Trimethyl-1-hexanol 14 (   | 2-Propyhepantan- 1-ol 0.00  | 3,7-Dimethyl-1-octanol 0.02  | 2-Methyl-1-undecanol 0.64 70 0.08  | (E  
   | )   |  | 1- Pentanol  | 1-Hoxanol<br>85 0.<br>93 1.  | 1 Hentanol<br>79 0.<br>00 1 1  
  | 1-Octand 79 0  | 1-Nonanol 179 0   | (<br>1-Decanol<br>79 0<br>00 1   | 1. Undecano<br>93 0<br>00 1  
   | 1 Dode ano  | 1 Tridecomo   | 2-Methyl-1-butanol 0 0 0   | 3-Methyl-1-butanol 90 4 4 0 0  
   | 4 04 04 04 04 04 04 04 04 04 04 04 04 04  |  | G-Method-1-hendrinol  | 2. Physhevanol 42.0  | 3,5,5-Trimethyl-1-hexanol 8 8 8 8   
  | 2-Propyhepantan-1-ol 0.4  | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undecanol  | (F)                         | 1-Pentanol   | 1-Hexanol   | 1-Heptanol 0.52<br>100   | 1-Octanol  | 1-Nortanol   | 1-Decanol<br>0.92<br>100  | 1-Undecanol  
  | 1-Dodecanol  | 4 1-Tridecanol   | 2-Methyl-1-butand  | 3-Methyl-1-butand   | 3-Methyl-1-pentanol   | 2- Ethyl- 1-butanol   
  | 6-Methyl-1-heptanol 42,45,00   | 3,5,5-Trmethy-T-nexanal   | 2-Propythepartan-1-ol  | 3,7-Dimethyl-1-octanol   
   | 2-Methyl-1-undecanol  |
| 2 Neth H-undecand   | 1.00 0.<br>0.91 1.<br>0.91 1.<br>0.97 0.   | 1-Hexano<br>000 0<br>182 0   | 1-Heptanol   | 1-Octano<br>0.75<br>0.82<br>1.00   | 1-Nonanol<br>0.75<br>0.82<br>1.00   |  
  | 1-Decanol 75   00 :  | 1-Undecanol<br>0.75<br>0.93<br>1.00   | 1- Dodecanol<br>0.75<br>0.82<br>0.93<br>1.00  | 1-Tridecanol<br>0.75<br>0.82<br>1.00   | 2-Methyl-1-butanol 0.73<br>0.66<br>0.61  | 3-Methyl-1-butanol   | 3-Methyl-1-pentanol  |                     |   
   | 6-Methyl-1-heptanol 66 0<br>81 0<br>82 0   | 2-Ethylhexanol  | 3,5,5-Trimethyl-1-hexanol 14 (   | 2-Propyhepantan-1-ol  | 3,7-Dimethyl-1-octand  | 2-Methyl-1-undecanol   | (E<br>1-Penta noi<br>1-Henanoi<br>1-Henanoi<br>1-Octanoi  
   | )   |  | 1- Pentanol  | 1-Hexanol<br>85 0.<br>93 1.<br>93 1.   | 1-tentanol<br>79 0.<br>00 1 1  
  | 1-Octand<br>79 0<br>00 1<br>00 1   | 1-Nonanol<br>179 0<br>193 0<br>100 1  | (<br>1. Decanol<br>79 0 1<br>0 1<br>0 1  | 1-Undecanol<br>79 0<br>00 1<br>00 1  
   | 79 0<br>1. Dode Ginol<br>1. 20 1<br>1. 00 1   | 1 Therappi  | 2-Methyl-1-butanol 40 55 55 55 50 0 0  | 3-Methyl-1-butanol 99 4 41 0 0   
   | 4 04 9 03 7 03 7 03 7 03 7 03   |  | 6. Method 1-hendronol 59 0.   | 2. Ethylhexanol 42 0   | 3,5,5-Trimethyl-1-hexanol 8 8 8 8 8   
  | 2-Propyhepantan- 1-ol 0.40  | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undecanol  | (F)                         | 1-Pentanol   | 1-Hexanol   | 1-Heptanol 0.52<br>1.00<br>1.00  | 1-Octanol  | 1-Noranol  | 1-Decimol<br>0.92<br>100<br>100   | 1-Undecanol<br>0.92<br>100<br>100  
  | 1-Dodecanol<br>0.92<br>1.00<br>1.00  | 4 1-Tridecanol 0.92<br>100<br>100  | 2-Methyl-1-butanol   | 3-Methyl-1-butanol  | 3-Methyl-1-pentanol   | 2-Ethy-1-butanol  
  | 6-Methy-1-heptanol 40 0 0 0  | 3,5,5-TFmethy-1-hexanol   | 2-Propytheparitan-1-ol<br>0.23<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03   | 3,7- Dimethyl-1-octanol  
   | 2-Methyl-1-undecanol  |
| 2 Neth H-urdecard   | 1.00 0.<br>1.00 0.<br>0.91 1.<br>0.81 0.<br>0.75 0.<br>0.75 0.   | 1-<br>   | 1-Heptanol<br>1.81<br>1.93   | 1-Octanol<br>0.75<br>0.82<br>1.00<br>1.00  | 1-Nonanol<br>0.75<br>0.82<br>100<br>100   |  
  | 1-Decanol 75   1 00 : 20 10 : 20 10 : 20 10 : 20 10 : 20 10 : 20 10 : 20 10  | 1-Undecanol<br>0.75<br>0.82<br>1.00<br>1.00   | 1- Dodecanol<br>0.75<br>0.93<br>1.00<br>1.00  | 1-Tridecanol<br>0.75<br>0.82<br>1.00<br>1.00   | 2-Methyl-1-butanol 0.79<br>0.61<br>0.61  | 3-Methyl-1-butanol<br>0.79<br>0.61<br>0.61   | 3-Methyl-1-pentanol  |                     |   
   | 6-Methyl-1-heptanol 66 0 0 22 0 0 22 0 20 22 0 20 22 0 20 20 2   | 2-Ethylhexanol<br>178 (<br>179 (<br>179 (   | 3,5,5-Trimethyl-1-hexanol 44   | 2-Propythepantan-1-ol 0.62<br>0.82<br>0.82  | 3,7-Dimethyl-1-octanol 0.62 0.76 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0  | 2-Methyl-1-undecanol   | (E<br>1-Penta nol<br>1-Hestano<br>1-Octanol<br>1-Octanol<br>1-Oceanol   
   | )   |  | 1- Peritanol<br>1.00 (<br>1.85 )<br>1.79 (<br>1.79 (<br>1.79 )   | 1 Hoxanol<br>85 0.<br>93 1.<br>93 1.<br>93 1.  | 1 Hortanol<br>99 0.<br>00 1<br>00 1<br>00 1  
  | 1. Octanol<br>79 0<br>93 0<br>100 1<br>00 1  | 1-Nonanol<br>179 0<br>193 0<br>100 1<br>100 1   | (<br>1-Decanol<br>79 0<br>100 1<br>00 1<br>00 1  | 1-Undecanol<br>79 0<br>93 0<br>00 1<br>00 1  
   | #F6<br>1. Dode canol<br>1.79 0<br>1.79 0<br>1.79 0<br>1.79 0<br>1.79 0<br>1.00 1<br>1.00 1<br>1.00 1  | 1 Tride con 0<br>93 0<br>00 0<br>00 0   | 2-Methyl-1-butanol 40 55 53 53 53 53 53 53 53 53 53 53 53 53   | 3-Methyl-1-butanol 90 4 41 0 0   
   | 4 04<br>7 03<br>7 03<br>7 03<br>7 03  |  | 59 0)<br>58 0:<br>58 0:<br>58 0:<br>58 0:   | 2. Ethylhexanol 42 0 38 0 36 0 36 0 36 0 36 0 36 0 36 0 36   | 3,5,5-Trimethyl-1-hexanol 33,2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0  
  | 2-Propyhepantan- 1-ol 0.40  | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undecanol  | (F)                         | 1-Pentanol<br>1.00 (<br>0.92 )<br>0.92 )<br>0.92 )   | 1-Hexanol<br>100<br>100<br>100  | 1-Heptanol<br>100<br>100<br>100  | 1-Octanol  | 1-Noranol  | 1-Decimol<br>0.92<br>100<br>100<br>100  | 1-Undscanol<br>0.92<br>100<br>100<br>100   
  | 1-Dodecano<br>1.00<br>1.00<br>1.00   | 4 1-Tridecanol<br>0.92<br>100<br>100<br>100  | 2-Methyl-1-butand  | 3-Methyl-1-butand   | 3-Methyl-1-pentanol   | 2-Ethyl-1-butanol   
  | 6-Methyl-1-heptanol 40 0 445 0 0   | 3,5,5-IFFmethy-1-nexanol 02 02 02 02 02 02 02 02 02 02 02 02 02   | 2-Propytheparitan-1-ol<br>0.35<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0. | 3,7- Dimethyl-1-octanol  
   | 2-Methy-1-undecanol 41 55 55 45 45 45 45 45 45 45 45 45 45 45                                 |
| 2 Neth H-undecard   | 1.00 0.<br>0.91 1.<br>0.75 0.<br>0.75 0.<br>0.75 0.  | 1-Hexanol<br>000 0<br>182 0<br>182 0<br>182 0  | 1-Heptanol<br>1.81<br>1.88<br>1.00<br>1.93   | 1-Octanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00  | 1-Nonanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00   | 5 0.1<br>2 0.5<br>0 1.1<br>0 1.1<br>0 1.1  
  | 1. Decanol<br>75  <br>93  <br>00 :   | 1-Undecanol<br>0.75<br>0.82<br>1.00<br>1.00   | 1- Dodecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00  | 1-Tridecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00   | 2-Methyl-1-butanol 0.79<br>0.61<br>0.61<br>0.61  | 3-Methyl-1-butanol<br>0.73<br>0.66<br>0.61<br>0.61   | 3-Methyl-1-pentanol  |                     |   
   | 6: Methyl-1-heptanol 66 0<br>72 0<br>81 0<br>82 0<br>82 0  | 2-Ethylhexanol  | 3,5,5-Trimethyl-t-hexanol 144 (  | 2-Propyhepantan-1-ol 0.62<br>0.82<br>0.82   | 3,7-Dimethyl-1-octanol 62 68 0.76 68 88 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0                                    | 2-Methyl-1-undecanol 0.64<br>0.79<br>0.85<br>0.85  | (E<br>1-Penta noi<br>1-Heranoi<br>1-Octanoi<br>1-Octanoi<br>1-Octanoi<br>1-Octanoi  
   |   |  | 1- Peritanol<br>1.85 1<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (   | 1-Hexanol<br>85 0.0<br>93 1<br>93 1<br>93 1<br>93 1  | 79 0.<br>93 0.<br>00 1<br>00 1<br>00 1   
  | 1-Octand<br>79 0<br>00 1<br>00 1<br>00 1   | 1-Nonanol<br>179 0<br>193 0<br>100 1<br>100 1<br>100 1  | 1. Decanol<br>79 0<br>00 1<br>00 1<br>00 1   | 1-Undecanol<br>79 0<br>93 0<br>00 1<br>00 1<br>00 1  
   | 1- Dode canol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1   | 1 Tride com<br>93 0.<br>00 0.<br>00 0.<br>00 0.   | 2-Methyl-1-butanol 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 3-Methyl-1-butanol 90 4 4 0 0  
   | 4 04<br>9 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03  |  | 59 0)<br>58 0:<br>58 0:<br>59 0:<br>50 0<br>50 0   | 2. Ethylheyanol<br>42 0<br>36 0<br>36 0<br>36 0<br>36 0  | 3,5,5-Trimethyl-1-hexanol 83 82 80 80 00   | 2-Propylhepantan- 1-ol 0.40   | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undscanol 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8                                    | (F)                         | 1. Pentanol<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1   
  | 1-Hexanol<br>0.92<br>1.00<br>1.00<br>1.00   | 1-Heptanol 0.52<br>100<br>100<br>100<br>100  | 1-Octanol  | 1-Noranol  | 1. Decanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00  | 1-Undecanol<br>0.92<br>100<br>100<br>100  | 1-Dodecato<br>1.00<br>1.00<br>1.00<br>1.00  
  | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100  | 2-Methyl-1-butand  | 3-Methyl-1-butanol  | 3-Methyl-1-pentanol   | 2: Ethyl-1-butanol   | 6-Methyl-1-heptanol 40 0 0 445 0 0
445 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 45 0 0 0 45 0 0 0 45 0 0 0 0   | 3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-1Fmethy-1-hexanol<br>3,5,5-   | 2- Propylheparitan-1-ol<br>0.33<br>0.033<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0 | 3,7-Dimethyl-1-octanol   | 2-Methyl-1-undecanol 41 52 52 52 52 53 53 53 53 53 53 53 53 53
53 53 53 53                    |
| 2 Neth H-urdecard   | 1.00 0.<br>0.91 1.<br>0.91 1.<br>0.91 0.<br>0.75 0.<br>0.75 0.<br>0.75 0.  | 1-Hoxano<br>0 0 0 0<br>0 0 0 0<br>0 0 0 0<br>0 0 0 0<br>0 0 0 0 0<br>0   | 1-Heptanol<br>1.81<br>1.93<br>1.93   | 1-Octanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00  | 1-Nonanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00   |  
  | 1. Decanol<br>75  <br>93  <br>00 :<br>00 :   | 1-Undecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00   | 1- Dodecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00  | 1-Tridecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00   | 2-Methyl-1-butanol 0.79<br>0.61<br>0.61<br>0.61<br>0.61  | 3-Methyl-1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>0.61   | 3-Methyl-1-pentanol  |                     |   | 6-Methyl-1-heptanol<br>81 0<br>81
0<br>81 0<br>81 0<br>81 0  | 2-Ethylhexanol 68 (<br>174 (<br>179 (<br>179 (<br>179 (   | 3,6,5-Trimethyl-t-hexanol  | 2- Propyhepantan- 1-ol 0.62<br>0.63<br>0.82<br>0.82   | 3,7-Dimethyl-1-octand  | 2-Methyl-1-undecanol 0.64<br>0.79<br>0.85<br>0.85<br>0.85  | (E   
  |   |  | 1- Pentanol<br>1.00 (<br>1.85 )<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (  | 1-Hoxanol<br>85 0.0<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.   | 79 0.<br>93 0.<br>00 1<br>00 1<br>00 1<br>00 1  
   | 1. Octano<br>79 0<br>193 0<br>100 1<br>100 1<br>100 1<br>100 1   | 1-Nonanol<br>179 0<br>193 0<br>100 1<br>100 1<br>100 1<br>100 1   | 1-Decanol 79 0<br>00 1<br>00 1<br>00 1   | 1-Undecanol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1   
  | 7 Dodecano<br>179 0<br>179 0<br>193 0<br>193 0<br>100 1<br>100 1<br>100 1   | 1 Tride carol<br>99 0. 0.<br>00 0. 0.<br>00 0. 0.<br>00 0. 0.   | 2-Methyl-1-butanol 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 3-Methyl-t-butanol 90 44 41 0 0<br>44 41 0 0  
  | 4 04<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03  |  | 59 0)<br>58 0]<br>58 0]<br>58 0]<br>58 0]<br>58 0]<br>58 0]<br>58 0]<br>58 0]<br>58 0]<br>58 0]   | 2. Ethylheganol<br>42 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0  | 3,5,5-Trimethyl-1-hexanol 8,82,0000000000000000000000000000000000  
   | 2-Propyhepantan-1-ol<br>0.40<br>0.41<br>0.41<br>0.41  | 3,7-Dimethy4-t-octanol  | 2-Methyl-1-undecanol 0 0 44 44 44 44 44 44 44 44 44 44 44 44                                  | (F)                         | 1-Pentimol<br>1.00 (<br>0.92 )<br>0.92 )<br>0.92 )<br>0.92 )<br>0.92 )   | 1-Hexanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00   | 1-Heptanol<br>100<br>100<br>100<br>100<br>100  | 1-Octanol  | 1-Noranol  | 1-Decanol<br>0.92<br>100<br>100<br>100<br>100   | 1-Undecanol<br>0.92<br>100<br>100<br>100<br>100   
   | 1-Dodecanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00  | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100<br>100   | 2-Methyl-1-butanol<br>0.23<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24         | 3-Methyl-1-butanol  | 3-Methyl-1-pentanol   | 2-Ethyl-1-butanol  
   | 6-Methyl-1-heptanol 40 0 0 445   | 3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-hexanol<br>3,5,5-Trimethy-1-h 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Propythepantan-1-ol<br>0.33<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0.035<br>0. | 3,7-Dimethyl-1-octanol<br>9 0.24<br>9 0.24  
  | 2-Methyl-1-undecanol 41 45 45 45 45 45 45 45 45 45 45 45 45 45                                |
| 2Neth H-urdeand<br>(D)<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Person<br>Per | 1.00 0<br>0.57 0<br>0.51 1<br>0.15 0<br>0.75 0<br>0.75 0<br>0.75 0   | 1-Hoxano<br>000 0<br>1882 0<br>1882 0<br>1882 0<br>1882 0<br>1882 0  | 1-Heptanol<br>1.81<br>1.93<br>1.93<br>1.93   | 1-Octanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>1.00  | 1-Nonanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00   |  
  | 1. Decimol<br>75  <br>93  <br>93  <br>93  <br>93  <br>93  <br>93  <br>93  <br>93   | 1-Undecanol<br>0.75<br>0.93<br>1.00<br>1.00<br>1.00   | 1- Dodecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00  | 1-Tridecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>1.00   | 2-Methyl-1-butanol 0.79<br>0.61<br>0.61<br>0.61<br>0.61  | 3-Methyl-1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61   | 3-Methyl-1-pentanol  |                     |   
   | 6-Methyl-1-heatanol 66 0<br>72 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81   | 2-Ethylhexanol 188 (<br>174 (<br>179 (<br>179 (<br>179 (<br>179 (<br>179 (<br>179 (   | 3,5,5-Trimethy4 1-hexanol  | 2-Propyhepantan-1-ol 0.62<br>0.82<br>0.82<br>0.82   | 3,7-Dimethyl-1-octand  | 2-Methyl-1-undecanol<br>0.54<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85   | (E  
   |   |  | - Pontanol<br>1.00 (<br>1.85 )<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (<br>1.79 (   | 1-Hoxanol<br>85 0.<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.  | 1 Hentanol<br>79 0. 1<br>93 0. 1<br>00 1<br>00 1<br>00 1<br>00 1   
  | 1-Octand<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1<br>00 1   | 1-Nonanol<br>179 0<br>193 0<br>100 1<br>100 1<br>100 1<br>100 1   | 1-Decanol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1  | 1. Undecanol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1<br>00 1   
   | 1. Dodecanol<br>1.79 0<br>1.93 0<br>1.00 1<br>1.00 1<br>1.00 1<br>1.00 1<br>1.00 1  | 1 Tride care  | 2-Methyl-1-butanol 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 3-Methyl-1-butanol 90 0 0 44 0 0 41 0 41 0 41 0 41 0 41 0  
   | 4 04<br>9 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03  |  | 5 Mathy 1 bentanol 59 0.  | 2. Phytheyanol 42 0 0 336 0 0 0 336 0 0 0 336 0 0 0 0  | 3,5,5-Trimethyl-1-hexanol 83 82 90 90 90 00 00 00 00 00 00 00 00 00 00  
  | 2- Propythepantan: 1- ol 0.40 0.41 0.41 0.41 0.41 0.41  | 3,7-Dmethyl-1-octanol   | 2-Methyl-1-undecanol  | (F)                         | 1-Pentano<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1  | 1-Hexanol<br>100<br>100<br>100<br>100   | 1-Heptanol 0.92<br>100<br>100<br>100<br>100<br>100<br>100  | 1-Octanol<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1  | 1-Normol   | 1-Decanol<br>0.92<br>100<br>100<br>100<br>100<br>100  | 1-Undecanol<br>0.92<br>100<br>100<br>100<br>100<br>100   
  | + Dodecarol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00  | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100<br>100<br>100  | 2-Methyl-1-butand<br>0.25<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24  | 3-Methyl-1-butanol<br>035<br>035<br>035<br>035<br>035<br>035<br>035<br>035<br>035         | 3-Methyl-1-pentanol   | 2-Ethyl-1-butanol   
  | 6-Methy-1-heptanol 40 0 0 445  | 3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>8,6,02<br>8,5,02<br>1,5,5-1rmethy-1-hexanol<br>8,5,02<br>1,5,5-1rmethy-1-hexanol<br>8,5,02<br>1,5,5-1rmethy-1-hexanol<br>8,5,02<br>1,5,5-1rmethy-1-hexanol<br>8,5,02<br>1,5,5-1rmethy-1-hexanol<br>8,5,02<br>1,5,5-1rmethy-1-hexanol<br>8,5,02<br>1,5,5-1rmethy-1-hexanol<br>8,5,5-1rmethy-1-hexanol<br>8,5,5-1rmethy-1-hexanol<br>8,5,5,5-1rmethy-1-hexanol<br>8,5,5,5-1rmethy-1-hexanol<br>8,5,5,5-1rmethy-1-hexanol<br>8,5,5,5-1rmethy-1-hexanol<br>8,5,5,5,5-1rmethy-1-hexanol<br>8,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5   | 2-Propylhepantan-1-ol<br>0.33<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.0   |
3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol<br>3,7-Dimethyl-1-octanol   | 2-Methyl-1-undecanol  |
| 2 Neth H-undecard   | 1000 0<br>1000 0<br>1000 0<br>0.75 0<br>0.75 0<br>0.75 0<br>0.75 0<br>0.75 0<br>0.75 0<br>0.75 0   |  | 1-Heptanol<br>1.81<br>1.88<br>1.93<br>1.93<br>1.93                                 | 1-Octand<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61   | 1-Nonanol<br>0.75<br>0.93<br>1.00<br>1.00<br>1.00<br>0.61   | 5 0.1<br>2 0.5<br>3 0.1<br>0 1.1<br>0 1.1<br>0 1.1<br>0 1.1<br>1 0.1   
  | 1. Decanol<br>75 1<br>93 1<br>00 2<br>00 2<br>00 2<br>00 2<br>00 2<br>00 2<br>00 2<br>00   | 1-Undecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>0.61   | 1- Dodecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61  | 1-Thdecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61  | 2-Methyl-1-butanol<br>0.73<br>0.61<br>0.61<br>0.61<br>0.61   | 3-Methy4-1-butanol<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61   | 3-Methyl-1-pentanol<br>0.84<br>0.06<br>0.06<br>0.06<br>0.06<br>0.06<br>0.06<br>0.06<br>0.0   |                     |   
   | 6-Methyl-1-heptanol 66 0 0<br>72 0 0<br>81 0 0<br>81 0 0<br>81 0 0<br>81 0 0<br>81 0 0   | 2-Ethylhexanol<br>174 (<br>179 (<br>179 (<br>179 (<br>179 (<br>179 (<br>179 (   | 3,5,5-Trimethy-t-hexanol 164 (   | 2-Propyhepantan-1-ol 0.62<br>0.76<br>0.82<br>0.82<br>0.82   | 3,7-Dimethyl-1-octanol 0.62<br>0.05<br>0.05<br>0.05  | 2-Methyl-1-undecanol<br>0.64<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85                 | (E<br>1-Perta nol<br>1-Heranol<br>1-Heranol<br>1-Heranol<br>1-Gecanol<br>1-Unde ar<br>1-Gode ar<br>1-Gode ar<br>1-Gode ar<br>1-Gode ar<br>1-Gode ar<br>1-Gode ar<br>1-Gode ar<br>1-Gode ar  
   |   | 1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | - Pontanol<br>1.00 (<br>1.85 (<br>1.79 (<br>1.79)          | 1-Hexprod<br>85 0.00 0.<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.<br>93 1.  | 79 0.<br>93 0.<br>00 1<br>00 1<br>00 1<br>00 1<br>00 1<br>00 1  | 1. Octano<br>93 0<br>00 1<br>00 1<br>00 1<br>00 1<br>33 0  
   | 1-Nonanol<br>179 0<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1   | 1-Decanol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1<br>100 1<br>33 0   | 1. Undecanol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1<br>00 1<br>33 0   | 1 Dode Canol<br>193 0<br>00 1<br>00 1<br>00 1<br>00 1<br>133 0  
   | 1 The 5 The   | 2-Methyl-1-butanol 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 3-Methyl-1-butanol 90 0 0 44 0 0 44 1 0 0 0 44 1 0 0 44 1 0 0 44 1 0 0 0 44 1 0 0 0 44 1 0 0 0 44  | 4 04<br>9 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7   |  | 5 Mathy 1 bentanol<br>5 2 0 1<br>5  | 2. Phyliceland<br>42 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36   
   | 3,5,5-Trimethyl-1-hexanol 33 22 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 2- Propyhepantan- + ol<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41  | 3,7-Dmethyl-t-octanol   | 2-Methyl-1-undecanol<br>0.40<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48          | (F)                         | 1-Pentanol<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1<br>0.92 1   | 1-Hexanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00                 | 1-Heptanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.0  | 1-Octanol<br>092 (<br>100 )<br>100 )<br>100 )<br>100 )<br>100 )<br>100 )   
   | 1-Noranol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00  | 1-Decanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00   | 1-Undecanol<br>0.92<br>100<br>100<br>100<br>100<br>100<br>100   | + Dodecanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00  | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100<br>100  
  | 2-Methyl-1-butanol<br>0.25<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24 | 3-Methyl-1-butanol<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35        | 3-Methyl-1-pentanol   | 2-Ethyl-1-butanol  | 6-Methyl-1-heptanol 40 0 0 445 0 0 45 0 0 0   | 3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexanol<br>3,5,5-1rmethy-1-hexan  | 2-Propylhepantan-1-ol<br>0.33<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.0  
  | 3,7-Dimethyl-1-octanol<br>9 0.24<br>9 0.24 | 2-Methy-1-undecanol 41 53 55 55 55 55 55 55 55 55 55 55 55 55                                 |
| 2 Neth H-undecard   | 1.00 0.<br>1.00 0.<br>0.75 0.<br>0.<br>0.75 0.<br>0.75 0.<br>0.<br>0.75 0.<br>0.<br>0.75 0.<br>0.<br>0.<br>0.75 0.<br>0.<br>0.<br>0.<br>0.<br>0.<br>0.<br>0.<br>0.<br>0.   | -1-Hoxano<br>191 0<br>882 0   | 1-Heptanol<br>1.81<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93                         | 1-Octano<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61   | 1-Nonanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61   |   
   | 1. Decano<br>1. Dec | 1-Undecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00   | 1- Dode Canol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61   | 1-Tridecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61   | 2-Methyl-1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>1.00   | 3-Mdhy4 1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>1.000   | 3-Methyl-1-pentanol  |                     |   | 6. Methyl-1-heatanol<br>66 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81   | 2-Ethylhexanol<br>174 (<br>179 (<br>179 (<br>179 (<br>179 (<br>171 (<br>171 (  
  | 3,5,5 Trimethyl 1 horanol  | 2-Propyhepantan- 1-ol 0.62<br>0.63<br>0.52<br>0.52<br>0.52<br>0.52  | 3,7-Dimethyl-1-octanol 0.62 82 0.82 0.82 0.82 0.82 0.82 0.82 0.82  | 2-Methyl-1-undecanol<br>0.64<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85                 | (E  | )<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I    |  | -1 Pontanoi<br>1.00 (<br>1.85 )<br>1.79 (<br>1.79          | 1-Hexanol<br>85 0.0<br>93 1.1<br>93 1.1  | 79 0.<br>93 0.<br>00 1<br>00 1<br>00 1<br>33 0.<br>41 0.   
  | 1-Octand<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1<br>33 0<br>41 0   | 1. Nonanol<br>179 0<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1   | 1. Decanol<br>79 0<br>00 1<br>00 1<br>00 1<br>33 0<br>41 0   | -Undecanol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1<br>33 0   
   | + Dode and<br>1 - Doda and<br>1 -   | 1 The second sec  | 2-Methyl-1-betanol 40 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 3-Methyl-1-butanol 50 0<br>44 0<br>41 0<br>41 0<br>41 0<br>54 0<br>0<br>0 0  | 4 04<br>9 03<br>7 03<br>7 03<br>7 03<br>7 03<br>9 03  |  | 59 0)<br>58 0]<br>58 0]<br>59 0]   
   | 42 0<br>38 0<br>36 0<br>36 0<br>36 0<br>36 0<br>37 0   | 3,5,5-Trimethyl-1-hexanol 83 80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 2-Propythepantan-+ol<br>0.40<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41                            | 3,7-Dmdhy4 1-octanol  | 2-Methyl-1-undecanol<br>0.40<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48          | (F)                         | 1-Pertanol<br>0.92 1<br>0.92 1   | 1-Hexanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.0         
| 1-Heptanol<br>0.92<br>100<br>100<br>100<br>100<br>100<br>0.23<br>0.23  | 1-Octanol<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1   | 1-Noranol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00  | 1-Decimo<br>0.92<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>2.34<br>0.25   | 1-Undecanol<br>0.92<br>100<br>100<br>100<br>100<br>100<br>100   | 1-Dodecarool<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.0   
  | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100<br>100<br>100  | 2-Methyl-1-butand<br>0 28<br>0 24<br>0 24<br>0 24<br>0 24<br>0 24<br>0 24<br>0 24<br>0 24  | 3-Methyl-1-butanol<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35        | 3-Methyl-1-pentanol   | 2- Ethyl-1-butanol<br>0 25 0<br>0 20 | 6-Methy-1-heptanol<br>445 0 0<br>445 0 0<br>440 0<br>445 0   | 3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-TFMethy-1-hexanol<br>3,5,5-   | 2 0.41<br>0 0.25<br>0 0.25   | 3,7-Dimethyl-1-octanol<br>9 0.24<br>9 0.24<br>0 0.24<br>9 0.24 | 2-Methyl-1-unde Ginol<br>0.41<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45 |
| 2 Neth H-undecard   | 100 0<br>100 0<br>100 0<br>100 0<br>100 0<br>100 0<br>100 0<br>100 0<br>0.75 0 | -1-Hoxano<br>191 0<br>000 0<br>182 0<br>182 0<br>182 0<br>182 0<br>182 0<br>182 0<br>173 0<br>173 0  | 1-Heptanol<br>1.81<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93                 | 1-0dano<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.61  | 1-Nonanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00   |   | 1. Decanol<br>75  <br>93  <br>00 :<br>00 :<br>61  <br>61   
   | 1-Undecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.66   | 1- Dodecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61  | 1-Tridecario<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.61   | 2-Methyl-1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61                                 | 3-Methyl-1-butanol<br>0.73<br>0.66<br>0.61<br>0.61<br>1.00<br>0.83   | 3-Methyl-1-pentanol<br>0.84<br>0.66<br>0.66<br>0.66<br>0.66<br>0.65<br>0.65<br>0.65<br>0.65  |                     | an a a a a a a a a a a a a a a a a a a  | 6-Methyl-t-heptanol<br>66 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81   
  | 2-Ethylhexanol<br>174 (<br>178 (<br>179 (<br>179 (<br>179 (<br>171 (<br>181 (   | 3,5,5 Trimethyl 1-hexanol  | 2-Propyhepantan-1-ol 0.62<br>0.68<br>0.76<br>0.82<br>0.82<br>0.82<br>0.82                                 | 3,7-Dimethyl-1-octanol   | 2-Methyl-1-undecanol<br>0.64<br>0.70<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.8          | (E<br>1-Penta nd<br>1-Hestano<br>1-Getano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octano<br>1-Octa | )<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I                                  | 1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 1. Pentano<br>1.00 0<br>1.85 1<br>1.79 0<br>1.79           | 5 0<br>5 0<br>5 0<br>5 0<br>5 0<br>5 0<br>5 0<br>5 0  
  | 79 0.<br>99 0.<br>00 1<br>00 1<br>00 1<br>1<br>33 0.<br>41 0.   | 1-Octano<br>79 0<br>93 0<br>100 1<br>00 1<br>00 1<br>133 0<br>41 0<br>37 0   | 1. Nonanol<br>1.79 0<br>1.00 1<br>1.00 1<br>1.00 1<br>1.00 1<br>1.00 1<br>1.00 1<br>1.00 1<br>1.33 0<br>1.41 0  
   | (<br>1-Decanol<br>79 0<br>00 1<br>00 1<br>00 1<br>00 1<br>33 0<br>41 0<br>37 0   | -Childecanol<br>79 0<br>00 1<br>00 1<br>00 1<br>33 0<br>41 0   | 7 Dode Canol<br>79 0<br>000 1<br>000 1000 1000 1000 1000 100000000   | 1 Tide canol<br>79 0.<br>00 0.<br>00000000 | 2-Methyl-1-betanol<br>40 0<br>33 0<br>33 0<br>33 0<br>33 0<br>34 1<br>57 0   | 3-Methyl-1-butanol<br>90 0 0 44 0 0<br>41 0 0 44 0 0<br>41 0 0 0 0<br>41 0 0 0 0<br>41 0 0 0 0 0   
   | 4 04<br>9 03<br>7 03<br>7 03<br>7 03<br>9 03<br>0 03  | 0          | A.Methyd. 4. heedanol<br>59 02<br>58 03<br>58 0<br>58 0<br>58 0<br>58 0<br>58 0<br>58 0<br>58 0<br>58 0   | 42 0<br>36 0<br>36 0<br>36 0<br>36 0<br>37 0<br>40 0   | 3,5,5-Trimethyl-1-hexanol 83 82 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 2-Propythepantan-+ol<br>0.40<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41                    | 3,7-Dimethyl-1-octanol  | 2-Methyl-1-undecanol<br>0.40<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48          | (F)                         | 1-Pertanol<br>0.92 1<br>0.92     | 1-Hexanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>0.24<br>0.25<br>0.27                 |
1-Heptanol<br>0.52<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00 | 1-Octanol<br>100 1<br>100 100 1<br>100 100 1<br>100 100 100 100 100 100 100 100 100 100  | 1-Noranol<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>10   | 1-Decino<br>0.92<br>100<br>100<br>100<br>100<br>100<br>100<br>24<br>0.23<br>0.27  | COM<br>1-Undecanol<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>10   | 1-Dodecano<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>0.24<br>0.23<br>0.27   | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100  
   | 2-Methyl-1-butand<br>0.25<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24  | G-Methyl-1-butanol<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35        | 3-Methyl-t-pentanol   | 2: Ethyl-1 butanol<br>0.25 0<br>0.25 0<br>00 000 0000000000000000000000000000                    | 6-Methy-1-heptanol<br>445 0<br>445 0<br>440 0<br>445 0 | 3,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1<br>1,5,5-1, | 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,  | 3,7-Dimethyl-1-octanol<br>2011<br>2012<br>2014<br>2014<br>2014<br>2014<br>2014<br>2014  
  | 2-Methy-1-undecanol<br>0.41<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45   |
| 2 Neth H-undecard   | 1.00 0.<br>3.91 1<br>0.51 1<br>0.51 0<br>0.75    |  | 1-Heptanol<br>1.81<br>1.88<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93 | 1-Octano<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.61   | 1-Nonanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00                                 |   | 1. Decanol<br>75   93   00 : 00 : 00 : 00 : 00 : 00 : 00 : 0   
   | 1-Undecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.61   | 1- Dodecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.61<br>0.63  | 1-Tridecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.66<br>0.66   | 2-Mathyl-1-butanol<br>0.73<br>0.66<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.62                                 | 3-Methyl-1-butanol<br>0.73<br>0.66<br>0.61<br>0.61<br>1.00<br>0.88<br>0.92   | 3-Methyl-1-pentanol<br>0.84<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.6   |                     | 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 6: Methyl-1-heatinol<br>66 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81  
  | 2- Ethylhexanol<br>178 (<br>179 (<br>179 (<br>179 (<br>171 (<br>181 (<br>177 (  | 3,5,5-Trimethyl-1-hexanol  | 2- Propythepantan- 1-01 0.62<br>0.68<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82                      | 3,7-Dimethy4 f-octanol<br>0.62<br>0.63<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82         | 2-Methyl-1-undecanol<br>0.64<br>0.70<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.8          | (E<br>1-Aenta noi<br>1-Hexanoi<br>1-Hexanoi<br>1-Oceanoi<br>1-Oceanoi<br>1-Oceanoi<br>2-Mexto y-1<br>2-Mexto y-1<br>2  | )<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I                                  | 1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 1.00 (<br>1.05 (<br>1.05 (<br>1.79 (<br>1.       | - HO X200<br>- HO X200<br>- SS 0.0<br>- SS 0.0<br>- SS 1.1<br>- SS   | 79 0.<br>93 0.<br>00 1<br>00 1<br>00 1<br>1<br>00 1<br>1<br>0<br>0 1<br>0<br>0<br>0<br>0  
   | 1-Octano<br>93 0<br>00 1<br>00 1<br>00 1<br>33 0<br>41 0<br>33 0   | 1-Nonanol<br>179 0<br>193 0<br>100 1<br>100 1<br>100 1<br>133 0<br>133 0  | 1. Decanol<br>79 0<br>00 1<br>00 1<br>00 1<br>33 0<br>41 0<br>37 0<br>33 0   | 1. Undecorrol<br>79 0<br>93 0<br>00 1<br>00 1<br>00 1<br>33 0<br>41 0<br>33 0   
  | 7 Dodecanol<br>79 0<br>000 1<br>000 1<br>0000 1<br>000 1<br>00000 1<br>0000 1<br>000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000000  | 1 Tride 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 2-Methyl-1-buttanol<br>40 0<br>33 0<br>34 0<br>35  | 3-Methyl-1-butanol 90 0<br>44 0<br>41 0<br>41 0<br>54 0<br>54 0<br>54 0<br>54 0<br>54 0  | 4 04<br>9 03<br>7 03<br>7 03<br>9 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7   | 0          | A. Method. 4. heering 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,  
   | 42 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36 0<br>36   | 3,5,5-Trimethyl-1-hexanol 35 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 2: Propyhepantar); -: ol<br>0.40<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41                | 3,7-Dimethyl-t-octanol  | 2-Methyl-1-undecanol<br>0.40<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48<br>0.48          | (F)                         | 1.00 (<br>0.92 )<br>0.92 )   | 1-Hexanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>0.24<br>0.25<br>0.27<br>0.25 | 1-Heptanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>0.24<br>0.25<br>0.25   
   | 1-Octanool<br>1000 1<br>1000 1   | 1-Norano<br>1 00<br>1 00<br>1 00<br>1 00<br>1 00<br>1 00<br>1 00<br>1 0  | 1-Decinol<br>0.52<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>0.24<br>0.25<br>0.27<br>0.25   | CDK<br>1-Undecanol<br>0.922<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.   | 1- Dod e Garo<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.0 | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>10   
   | 2-Methyl-1-butand<br>0.25<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24  | 3-Methyl-1-butanol<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35        | 3-Methy-1-pentanol<br>0.23<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27  | 2: Ethyl-1: butanol<br>0.25 0<br>0.25 0<br>00000000000000000000000000000000000   | 6-Methyl-1-heptanol<br>445 0<br>445  | 3,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1-nexanol<br>1,5,5-1Fmethy-1,5-  | 2 0.41<br>2 0.41<br>2 0.41<br>0 0.32<br>0 0.32   | 3,7-Dimethyl-1-octanol<br>1022<br>9024<br>9024<br>9024<br>9024<br>9024<br>9024<br>9024<br>9  | 2-Methy-1-undecanol<br>0.41<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45   |
| 2 Neth H-undecard   | 1.00 0<br>1.00 0<br>1.00 1<br>0.75 0<br>0.75 0   | 1 HOXENDO<br>191 0<br>191 0<br>191 0<br>192 0<br>192 0<br>192 0<br>192 0<br>193 0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0<br>19<br>0 | 1-Heptanol<br>1.81<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93<br>1.93<br>1.9  | 1-Octano<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.63<br>0.82                         | 1-Nonanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.63<br>0.83                                 |   | 1. Decanol<br>75  <br>93  <br>00 :<br>61  <br>66  <br>63  <br>93   | 1-Undecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.62<br>0.62   | 1- Dodecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.63<br>0.63  | 1-Tridecanol<br>0.75<br>0.82<br>0.93<br>100<br>100<br>100<br>100<br>0.61<br>0.62<br>0.63<br>0.63   |
2-Methyl-1-butanol<br>0.73<br>0.66<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.62<br>0.63                 | 3-Methyl-1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>0.61<br>1.00<br>0.88<br>0.92<br>0.92   | 3-Methyl-1-pentanol<br>0.84<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.6   |                     | 3         0   | 6-Methyl-1-hertanol<br>66 0<br>81 0<br>810 | 2-Ethylhexanol<br>174 (<br>179 | 3,5,5-Trimethyl-1-hexanol  | 2- Propyhepantan- 1-01<br>0.62<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.8             | 3,7-Dimethy4 f-octanol<br>0.62<br>0.62<br>0.62<br>0.62<br>0.62<br>0.62<br>0.62<br>0.62                         | 2-Methyl-1-undecanol<br>0.64<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85<br>0.85                 | (E<br>1-Perta noi<br>1-Perta
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   | + Dodecano<br>.79 0<br>.00 1<br>.00 | 1 Trice 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 2-Methyl - butanol 40 0<br>33 0<br>33 0<br>33 0<br>33 0<br>33 0<br>33 0<br>33 0  | 3-Methyl-1-butanol<br>90 0<br>44 0<br>41 0<br>41 0<br>41 0<br>69 1<br>54 0<br>69 1<br>54 0<br>53 0   | 4 04<br>9 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7 03<br>7   | 0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0           0         0         0         0   
  | 5 Mathdi hertanol<br>5 2 0<br>5 2 0 0<br>5 2 | 42 0<br>42 0<br>38 0<br>36 0<br>37 0<br>37 0<br>37 0<br>37 0<br>37 0<br>37 0<br>37 0<br>38 0<br>37 0<br>39 0<br>39 0<br>30 0 | 3,5,5-Trimethyl-1-hexanol 35 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 2. Propylhepantar) + ol<br>0.40<br>0.43<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41<br>0.41 | 3,7-Dimithyl 1-octanol<br>0.38<br>0.33<br>0.33<br>0.33<br>0.33<br>0.33<br>0.33<br>0.33  | 2-Methyl-1-undecanol 0.40 0.48 0.48 0.48 0.48 0.48 0.48 0.48                                  | (F)                         | 1.00 (<br>0.92 )<br>0.92 (0.92 )<br>0.92 )<br>0.92 (0.92 (0.92 )<br>0.92 (0.92 (0.92 (0.92 )<br>0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0.92 (0  | 1-Hexanol<br>0.92<br>100<br>100<br>100<br>100<br>100<br>0.24<br>0.25<br>0.25<br>0.25      | 1-Heptanol<br>0.52<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00 | 1- Octannol<br>100 1<br>100 100 1<br>100 100 100 100 100 100 100 100 100 100  | 1-Nortanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.0  | 1-00<br>0.52<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.0   | CDK<br>1-Undecanol<br>0.922<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>1   | 1- Dodecanol<br>0.922<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.  
   | 4<br>1-Tridecanol<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>100<br>10   | 2-Methyl-1-butanol<br>0.25<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24 | 3-Methyl-1-butanol<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35<br>0.35        | 3-Methy-1-pentanol  | 2-Ehhyl-1-buttanol<br>0.25 0<br>0.25 0<br>00000000000000000000000000000000000  | 6-Methyl-1-heptanol<br>440 0<br>445  | 3,5,5,117methyl-1,1nexanol<br>3,5,5,117methyl-1,1nexanol<br>3,5,5,117methyl-1,1nexanol<br>3,5,5,12,1<br>3,5,5,12,1<br>3,5,5,12,1<br>3,5,5,12,1<br>3,5,5,12,1<br>3,5,5,12,12,1<br>3,5,5,12,12,1<br>3,5,5,12,12,1<br>3,5,5,12,12,12,1<br>3,5,5,12,12,12,12,12,12,12,12,12,12,12,12,12,  | 2 0.41<br>0 0.41<br>0 0.41<br>0 0.41<br>0 0.41<br>0 0.42<br>0 0.42   | 3,7-Dimethyl-1-octanol<br>1022<br>9024<br>9024<br>9024<br>9024<br>9024<br>9024<br>9024<br>9  
   | 2-Methy-1-unde Ginol<br>0.41<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45  |
Allehi Hurdeand	1.00 0. 1.00 0. 1.00 0. 1.00 0. 1.01 0. 0.75 0. 0.7	1-H- 51 0 51 0	1-Heptanol 1.81 1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.9	1-Octano 0.75 0.82 0.93 1.00 1.00 0.61 0.61 0.62 0.63 0.82 0.75	1-Nonanol 0.75 0.82 0.93 1.00 1.00 1.00 1.00 1.00 0.61 0.66 0.63 0.82 0.79	5 0.1 5 0.1 5 0.1 0 1.1 0 1.1 0 1.1 0 1.1 1 0.1 1	1. Decanol 75   93   93   93   93   93   93   93   93	1-Undecanol 0.75 0.82 0.93 1.00 1.00 1.00 0.61 0.61 0.62 0.63 0.62 0.63	1. Dode 2000 0.75 0.82 0.93 1.00 1.00 1.00 1.00 0.61 0.61 0.61 0.63 0.82 0.79 0.62	1-Tridecanol 0.75 0.82 0.93 1.00 1.00 0.61 0.62 0.63 0.82 0.63 0.82 0.63	2-Methyl-1-butanol 0.73 0.61 0.61 0.61 0.61 0.61 0.61 0.62 0.62 0.63 0.63 0.65	3-Methyl-1-butanol 0.79 0.61 0.61 0.61 0.61 0.61 0.61 0.61 0.62 0.92 0.99 0.73	3-Methyl-1-pentanol 0.94 0.75 0.76 0.95 0.9		30 0.0 674 0. 674 0. 63 0. 63 0. 63 0. 63 0. 74 0. 63 0. 63 0. 74 0. 74 0. 74 0. 77 0.	6-Methyl-1-heatinol 66 0 0 81 0 0 91 0 0 91 1 0	7-Ethylhexanol 174 ( 177 ( 179 ( 179 ( 177	3,5,5-Trimethy4 1-hexanol 164 ( 169 ( 169)	2-Propyhepantan- 1-01 0.62 0.82 0.82 0.82 0.82 0.82 0.82 0.82 0.8	3,7-Dimethyl-1-octanol 0.62 0.65 0.76 0.82 0.82 0.82 0.82 0.82 0.82 0.82 0.82	2-Methyl-1-undecanol 0.64 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.85	1 - Penta noi 1 - Henra noi 1 - Henra noi 1 - Octano 1 1 - Unos ar n 1 - Otos ar n 1 - Otos ar n 2 - Metro - V - S 3 - Metro - V - S 3 - Metro - V - S 2 - Stro - Los 2 - S - S - Toro - S 2 - S - S - Toro - S 3 - S - Toro - S - S - S - S - S - S - S - S - S -	) i i i i i i i i i i i i i	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Pertanol 1.00 ( 1.85 1 1.79 ( 1.79 ( 1.79)	1-Heypinol 85 0. 99 1. 99 1. 90 1. 90 1. 91 1. 91 1. 91 1. 93 1. 94 0. 94 0. 9	79 0. 93 0. 00 1. 00 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	1-Octanol 79 0 93 0 00 1 00 1 00 1 00 1 00 1 33 0 33 0 33 0 33 0 33 0 33 0	1. Nonanol 1.79 0 1.93 0 1.00 1 1.00 1 1.00 1 1.00 1 1.00 1 1.33 0 1.41 0 1.33 0 1.33 0 1.33 0 1.33 0 1.33 0	( 1. Decimol 79 0 93 0 100 1 100 1 100 1 100 1 100 1 133 0 141 0 158	1-Undecanol 79 0 93 0 00 1 00 1 00 1 00 1 00 1 33 0 33 0 33 0 33 0 33 0 33 0	# 6     Topological and a second secon	1 Tidecore 79 0. 00 0. 00. 0	2-Mathy-1-butanol 40 0 33 0 34 0 35 0 37 0	3-Methyl-1-butanol 50 0 44 0 41 0 41 0 41 0 54 0 55 0 56 0 57 0 58 0 59 0 59 0 50 0	4 04 9 03 7 03 7 03 7 03 7 03 7 03 7 03 7 03 7	0 0100 010 0 010 010 0 0 0	A Mathua - Hophanol 59 0) 58	42 0 42 0 38 0 39 0 30 0	3,5,5-Trimethyl-t-hexanol 33 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2. Propylhepantan 0 0.40 0.41 0.41 0.41 0.41 0.41 0.41 0.4	3,7-Dimithy4 f-octanol 0.38 0.33 0.33 0.33 0.33 0.33 0.33 0.33	N-Methyl-1-undecanol 0.40 0.48 0.48 0.48 0.48 0.48 0.48 0.48	(F)	1-Pentino 0.92 1 0.92 1	1-Hexanol 0.92 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1-Heptanol 100 100 100 100 100 100 100 10	1-Odano 100 1 100 100 1 100 100 100 100 100 100 100 100 100 100	1-Nortinol 0.92 1.00 1.00 1.00 1.00 1.00 1.00 0.24 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	1-D00100 100100 100100 100100 100010000 10001000000	CDK 1-Undectinol 0.92 1:00	1-Dodecanol 0.92 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	4 1-Tridecanol 100 100 100 100 100 100 100 100 100 10	2-Methyl-1-butanol 0.25 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24	3-Methyl-1-butanol 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	3-Methy-1-pentanol	2.Ehyl-1-butanol 0.25 0 0.25 0 00000000000000000000000000000000000	6-Methy-1-heptanol 445 0 445 0 440 0 445 0	3,5,5,111methyl-1.nexanol 3,5,5,111methyl-1.nex	2 0.41 2 0.41 0 0.33 0 0.33	3,7-Cimethyl-1-octanol 9 0.24 9 0.24 0 0.24 0 0.24 0 0.24 0 0.24 0 0.24 0 0.24 0 0.24 0 0.24	2-Methy-1-unde Gnol 0.41 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45
2 Neth H-undecard	1.00 0 0.57 0 1.00 0 0.51 1 0.75 0 0.75 0 0.84 0 0.84 0 0.85 0	1-H- 51 0 51 0 51 0 51 0 52 0 53 0	1-Heptanol 1.81 1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.9	1-Octand 0.75 0.82 0.93 1.00 1.00 1.00 1.00 0.61 0.61 0.62 0.63 0.82 0.82 0.82	1-Nonanol 0.75 0.82 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0		1. De 2100 1. De	1-Undecanol 0.75 0.82 0.93 1.00 1.00 1.00 1.00 0.61 0.61 0.61 0.62 0.82 0.82 0.93 0.82 0.93	1. Dode Ginol 0.75 0.82 0.93 1.00 1.00 1.00 1.00 0.61 0.61 0.61 0.62 0.63 0.82 0.82 0.82 0.63 0.82 0.82	1-Tridecanol 0.75 0.82 1.00 1.00 0.61 0.62 0.63 0.82 0.63 0.82 0.82 0.82	2-Mathyl-1-butanol 0.79 0.61 0.61 0.61 0.61 0.61 0.61 0.61 0.61	3-Methyl-1-butanol 0.79 0.61 0.61 0.61 0.61 1.00 0.88 0.92 0.73 0.69 0.73 0.61 0.61 1.00 0.88 0.92 0.69	3-Methyl-1-pentanol 0.84 0.75 0.76 0.66 0.70 0.66 0.70 0.66 0.70 0.66 0.70 0.70 0.70 0.66 0.70 0.70 0.70 0.66 0.70 0.75 0.70 0.75 0.70 0.75 0.70 0.75 0.7		50 0.0 67 0.0 63 0.0 74 0.0 63 0.0 75 0.0 71 0.0 71 0.0 72 0.0 73 0.0 74 0.0 75 0.0	6. Methyl-1-heatanol 66 0 72 0 81	2.Ethylhexanol 178 ( 179 ( 179 ( 179 ( 179 ( 171 ( 181 ( 181 ( 191 ( 181 ( 191 ( 181 ( 191	3,5,5-Trimethy4 1-hexanol 164 ( 169 ( 169)	2-Propyhepantan- 1-01 0.62 0.68 0.76 0.81 0.82 0.82 0.82 0.82 0.82 0.82 0.82 0.82	3,7-Dimethyl-1-octanol 0.62 0.65 0.76 0.82 0.82 0.82 0.82 0.82 0.82 0.82 0.82	2-Methyl-1-undecanol 0.64 0.70 0.85 0.85 0.85 0.85 0.85 0.85 0.85 0.8	(E - Aesta nol - Heatanol - Heatanol - Octanol - Octanol - Octanol - Octanol - Heatano - Heata	) i i ol ol cutanol -spatanol anol cthro1-theoran anol cthro1-theoran	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- Pentiano L.00 ( 1.85 ) 1.79 ( 1.79 ( 1.29 ( 1.29)	1-HCXDPO 5000000000000000000000000000000000000	79 0. 93 0. 100 1 100 100 100 100 100 100 100 100 100 100	1-Octanol 79 0 93 0 00 1 00 1 00 1 00 1 00 1 33 0 53 0 53 0 33 0 41 0 53 0 33 0 41 0 53 0 50 0 5	1. Nonanol 1.79 0 1.93 0 1.00 1 1.00 1.00	1. Decimol 79 0 93 0 00 1 00 1 00 1 33 0 133 0 35 0 36 0 41 0	1-Undecanol 79 0 93 0 00 1 00 1 00 1 00 1 00 1 33 0 33 0 33 0 33 0 41 0 33 0 41 0 33 0 41 0 33 0 41 0 33 0 41 0 53 0 5 5 5 5 5 5 5 5 5 5 5 5 5	++ 6 Dodecanol .79 0 .00 1 .00 0 .00	1 Tridecom 79 0. 00 0. 00. 0	2.Mdthyl-1-butanol 40 0 33 0 30 0	3-Methyl-1-bifanol 50 0 44 0 41 0 41 0 41 0 54 0 53 0 53 0 53 0 53 0	4 04 9 03 7 03 7 03 7 03 7 03 0 05 7 10 0 03 7 10 0 03 0 03 0 03 0 03 0 03 0 03 0 03 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Therein         Second Sec	2. Phylice and 42 0 0 36 0 0 37 0 0 38 0 0 39 0 0 30 0 0 0 30 0 0 0 30 0 0 0	3,5,5-Trimethyl-t-hexanol 35 0 0 30 0 0 30 0 0 31 0 0 32 0 0 33 0 0 30 0 0 0 30 0 0 0 30 0 0 0	Propythepantary, +0 0,40 0,41 0,41 0,41 0,41 0,41 0,41 0,4	3,7-Climethyl 1-octanol 0.38 0.33 0.33 0.33 0.33 0.33 0.33 0.33	N-Methyl-1-Lindscanol 0.40 0.44 0.44 0.44 0.44 0.45 0.44 0.45 0.45	(F)	1.00 ( 0.92 ) 0.92 ( 0.92 ) 0.92 ) 0.92 ( 0.92 ) 0.92 ) 0.92 ( 0.92 ( 0.92 ) 0.92 ( 0.92 ( 0.92 ) 0.92 ( 0.92 ( 0.92 ) 0.92 ( 0.92 ( 0.	1-Hexanol 0.92 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	1-Heptanol 100 100 100 100 100 100 100 100 100 10	1-Odiano 100 1 100 1 10 1 1	1-Noranol 0.92 1.00 1.00 1.00 1.00 0.24 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	CDK 1-Undecanol 0.92 1:00	1-Dodecanol 0.92 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	4 1-Tridecanol 100 100 100 100 100 100 100 100 100 10	2-Methyl-1-butand 0.25 0.24 0.24 0.24 0.24 0.24 0.24 0.24 0.24	3-Methyl-1-butanol 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	3-Methyl-1-pentanol	N-Ethyl-1-butanol 0.25 0 0.25 0 00 00000000000000000000000000000000	6-Methy-1-heptanol 445 0 445 0 440 0 445 0 445 0 440 0	3,5,5-11111ethyl-1-hexanol 3,5,5-111111ethyl-1-hexanol 3,5,5-111111ethyl-1-hexanol 3,5,5-111111ethyl-1-hexanol 3,5,5-111111ethyl-1-hexanol 3,5,5-111111ethyl-1-hexanol 3,5,5-1111111ethyl-1-hexanol 3,5,5-111111ethyl-1-hexanol 3,5,5-111111ethyl-1-hexanol 3,5,5-1111111ethyl-1-hexanol 3,5,5-1111111111111111111111111111111111	2 0.41 2 0.41 0 0.35 0 0.45 0 0.55 0 0.55	3,7-Cimethyl-1-octanol 9 0.24 9 0.25 9 0.24 9 0.25 9 0.24 9 0.25 9 0.24 9 0.25 9 0.24 9 0.25 9 0.25	2-Methyl-1-undecanol 0.41 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45
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  | 1. De Canol<br>75  <br>93  <br>00 :<br>00 :<br>61  <br>66  <br>67  <br>93  <br>93  <br>00 :<br>61  <br>66  <br>93  <br>93  <br>93  <br>93  <br>93  <br>93  <br>93  <br>93  | 1-Undecanol<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.62<br>0.82<br>0.82<br>0.82<br>0.82                         | 1. Dodecano<br>0.75<br>0.82<br>0.93<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>0.61<br>0.61<br>0.62<br>0.79<br>0.69<br>0.62<br>0.82<br>0.82                   | 1-Tridecanol<br>0.75<br>0.82<br>1.00<br>1.00<br>1.00<br>0.61<br>0.62<br>0.63<br>0.82<br>0.82<br>0.69<br>0.69<br>0.61<br>0.62<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.83 | 2-Mathyl-1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61                         | 3-Methyl-1-butanol<br>0.79<br>0.61<br>0.61<br>0.61<br>0.61<br>1.00<br>0.88<br>0.92<br>0.69<br>0.73<br>0.69<br>0.61<br>1.00<br>0.63<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.61<br>0.65<br>0.65<br>0.65<br>0.65<br>0.65<br>0.65<br>0.65<br>0.65 | 3-Methyl-1-pentanol<br>0.84<br>0.75<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.66<br>0.75<br>0.66<br>0.66<br>0.75<br>0.66<br>0.75<br>0.66<br>0.75<br>0.66<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.75<br>0.7 |                     | 30 0.0<br>63 0.0<br>63 0.0<br>63 0.0<br>63 0.0<br>63 0.0<br>63 0.0<br>63 0.0<br>63 0.0<br>63 0.0<br>74 0.0<br>74 0.0<br>63 0.0<br>74 0.0<br>74 0.0<br>74 0.0<br>74 0.0<br>74 0.0<br>74 0.0<br>74 0.0<br>74 0.0<br>75 0.0<br>74 0.0<br>75 0.0<br>77 0.0  | 6. Methyl-1-heatanol<br>66 0<br>72 0<br>81 0<br>81 0<br>81 0<br>81 0<br>81 0<br>91 1<br>81 0<br>91 1<br>91 0<br>91 1<br>94 0  
  | 2.Ethylhexanol<br>178 (<br>179 (<br>170 (<br>179 (<br>170 (<br>179 (<br>170 | 3,5,5,5,7Hmethy4,7,h9xanol<br>1,5,6,5,7Hmethy4,7,h9xanol<br>1,6,4,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,0<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,000<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,00<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6,9,000<br>1,6   | 2-Propyhepantan-1-ol 0.62<br>0.68<br>0.76<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82 | 3,7- Dimethyl-1-octand<br>0.62<br>0.63<br>0.76<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82<br>0.82 | 2-Methyl-1-undecanol<br>0.64<br>0.70<br>0.85<br>0.85<br>0.85<br>0.67<br>0.71<br>0.88<br>0.97<br>0.88<br>0.97 | (E<br>1-Perta noi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1-Persanoi<br>1  | b)  | 1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | - Pentiano<br>Loco (<br>1.85 1<br>1.79 (<br>1.79 (<br>1.79)          | 1-1-0<br>85 0.0<br>00 0.0<br>93 1.1<br>93 0.1<br>93 0.1  | 79 0.<br>79 0.<br>93 0.<br>100 1<br>00 0<br>00 1<br>00 0<br>00 1<br>00 0<br>00 1<br>00 0<br>00 0<br>0 | 1. Ottand<br>79 0<br>93 0<br>100 1<br>00 1<br>00 1<br>33 0<br>33 0<br>33 0<br>33 0<br>34 0<br>33 0<br>33 0<br>34 0<br>33 0<br>30 0     | 1-Nonanol<br>179 0<br>193 0<br>100 1<br>100 1<br>100 1<br>100 1<br>100 1<br>133 0<br>133 0<br>136 0<br>130 0<br>130 0<br>130 0  |
(<br>1-Decino)<br>79 0<br>93 0<br>100 1<br>100 100 1<br>100 100 1<br>100 100 100 100 100 100 100 100 100 100   | 1-Undecanol<br>79 0<br>00 1<br>00 1<br>00 1<br>33 0<br>35 0<br>30 0<br>30 0<br>41 0  | 1- Dodecanol<br>779 0<br>0.00 1<br>0.00 0<br>0.00 1<br>0.00 0<br>0.00 1<br>0.00 0<br>0.00 0<br>0  | 1 Tride   | 22-Mathyl - bitanol<br>40 0<br>33 0<br>30  | 3-Methyl-1-bifanol<br>50 0<br>44 0<br>41 0<br>41 0<br>54 0<br>53 0<br>53 0<br>55 0   | 4 04<br>9 03<br>7 03<br>7 03<br>7 03<br>7 03<br>0 03<br>7 10<br>0 03<br>7 10<br>0 03<br>0 03<br>0 03<br>0 03<br>0 03<br>0 03<br>0 03<br>0   | 0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0           0         0         0         0         0  
   | Therein         Second Sec  | 2. Phylice and<br>4.2 0 0<br>3.8 0 0<br>3.6 0 0<br>3.7 0 0<br>5.0 0 0<br>5.0 0 0<br>5.0 0 0<br>5.0 0 0<br>5.0 0 0<br>5.0 0 0 0<br>5.0 0 0 0 0<br>5.0 0 0 0 0<br>5.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0   | 3,5,5-Trimethyl-t-hexanol 35 0 0<br>30 0 0<br>30 0 0<br>31 0<br>32 0<br>33 0 0<br>30 0<br>33 0 0<br>30 0<br>30 0<br>30   | Propythepantary, +0<br>0,40<br>0,41<br>0,41<br>0,41<br>0,41<br>0,41<br>0,41<br>0,4                      | 3,7-Climethyl 1-octanol<br>0.38<br>0.33<br>0.33<br>0.33<br>0.33<br>0.33<br>0.33<br>0.33 | N-Methyl-1-undecanol<br>0.40<br>0.44<br>0.44<br>0.44<br>0.44<br>0.44<br>0.44<br>0.4           | (F)                         | 1-Pentianol<br>0.922 1<br>0.922 1<br>0.923 1<br>0.923 1<br>0.924 1<br>0.926 1<br>0.  | 1-Hexanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.0          | 1-Heptanol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>0.24<br>0.25<br>0.25<br>0.25<br>0.35<br>0.35<br>0.20<br>0.35   | 1-04<br>092 (<br>100 1<br>100 1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   | 1-Norranol<br>0.92<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>0.24<br>0.25<br>0.25<br>0.25<br>0.25<br>0.25<br>0.25<br>0.25<br>0.25 | 1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00   
  | CDK<br>1-Undecanol<br>0.922<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00 | 1-Dodecinol<br>0.922<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.   | 4<br>1.Tridecanol<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1.00<br>1 | 2-Methyl-1-butand<br>0.25<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24<br>0.24  | 3-Methyl-1-butanol<br>0.35<br>0.25<br>0.25<br>0.25<br>0.25<br>0.25<br>0.25<br>0.25<br>0.2 | 3-Methyl-1-pentanol<br>0.23<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27<br>0.27 | N-Ethyl-1-butanol<br>0.25 0<br>0.25 0<br>00000000000000000000000000000000000   | 6-Methy-1-heptanol<br>40 0<br>445 0<br>440 0  |
3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-11111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-1111111ethyl-1-hexanol<br>3,5,5-11111111ethyl-1-hexanol<br>3,5,5-1111111ethyl-1-hexanol<br>3,5,5-111111ethyl-1-hexanol<br>3,5,5-11111111ethyl-1-hexanol<br>3,5-111111111111111111111111111111111111  | <ul> <li>Propythepartan</li> <li>Propythepartan</li> <li>O</li>     &lt;</ul>   | 3,7-Dimethyl-1-octanol<br>1 0.21<br>9 0.24<br>9 0.24<br>9 0.24<br>9 0.24<br>9 0.24<br>9 0.24<br>9 0.24<br>9 0.24<br>1 0.25<br>1 0.25   | 2-Methyl-1-undecanol<br>0.41<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45<br>0.45  |

## Figure 5

	EKSanded		COKIMACCS	CDK Extended
(A)	Silony 2:01 1-favy 3:01 1-favy 3:01 1-favy 3:01 2-favy 4:01 2-favy 4:01 2-favy 4:01 2-favy 4:01 2-favy 4:01 2-favy 4:01 2-favy 5:01 1-favy 5:01 2-favy 5:01 1-favy 5:01 1-fav	(B)	4-lanya 3-al 3-fertiya 2-al 1-fertiya 2-al 1-fertiya 2-al 2-fertiya 2-al 2-fertiy	440004361 34004361 14004361 14004361 14004361 34004461 34004461 34004461 34004661 340066661 340066666666666666666666666666666666666
1Pitopen-3-ol 2-Bitep 1-ol	100 079 055 045 079 051 045 051 045 051 046 071 055 052 055 055 055 051 059 024 059 054 059 050 051 058 057 055 075 100 071 074 075 075 075 075 075 075 075 075 075 075	2-Biten-3-0	110 015 055 055 055 055 041 041 041 041 045 052 055 057 058 057 055 057 055 057 058 050 058 050 058 050 058 057 050 058 050 058 050 058 050 058 050 058 050 050	
2Penten-1-d	055 071 100 075 071 051 051 051 055 072 052 077 051 075 085 085 020 085 021 085 025 024 025 024	2 2-Renter-1-cl	063 072 100 076 043 055 042 042 053 052 052 052 052 052 058 056 056 056 058 054 032 0.38 033 0.30 050 0.4	2-Ritarial 057 059 100 078 071 029 030 092 094 071 051 054 083 059 080 021 025 025 025 025 025 024 033 029 032 029 030
2Hean-1-ol	0.43 0.54 0.75 1.00 0.54 0.54 0.55 0.70 0.72 0.55 0.45 0.55 0.70 0.57 0.73 0.57 0.15 0.15 0.15 0.15 0.25 0.25 0.24 0.21 0.20 0	3 2-Helen-1-ol	035 052 076 100 038 042 050 036 048 040 051 051 071 054 033 022 048 030 054 036 037 0.8 044 036 038 031	2-Herer-3cl 0.44 0.54 0.78 100 055 051 035 0.71 0.74 082 0.40 0.51 0.55 0.54 0.55 0.55 0.55 0.55 0.55 0.55
1-Buten-3-ol 1-Dianten-3-ol	0.75 0.55 0.71 0.54 1.00 0.75 0.55 0.75 0.55 0.75 0.55 0.71 0.57 0.71 0.57 0.71 0.25 0.25 0.27 0.25 0.55 0.31 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	1-8040-901	048 041 055 048 058 100 051 054 059 056 058 050 041 050 056 051 055 044 051 058 050 049 049 049 044 044 044	
1+Hexen-3ol	045 045 051 055 050 075 100 054 045 055 055 055 055 055 055 055 0	20 1-Heisen-Brol	042 036 042 060 057 <b>076 100</b> 048 048 059 048 037 041 032 039 038 <b>034 037 0</b> 33 030 038 032 071 032 038 0.48	1-Here-Bel 050 045 050 055 055 055 055 048 057 055 052 049 045 051 045 051 055 052 045 051 045 051 055 055 055 055 055 055 055 055 05
3Perten-2-d	0.51 0.75 0.55 0.75 0.75 0.55 0.54 100 0.85 0.75 0.55 0.77 0.84 0.82 0.88 0.95 0.21 0.20 0.22 0.20 0.25 0.25 0.25 0.25 0.25	3 3-Renter-2-cl	041 050 042 056 054 050 043 100 071 067 042 050 041 050 085 077 031 035 030 085 054 0.47 037 0.73 059 0.50	3-References 0.52 0.75 0.52 0.71 0.15 0.54 0.55 1.00 0.87 0.75 0.55 0.55 0.75 0.75 0.85 0.55 0.55 0.55 0.55 0.55 0.55 0.5
3HB(B)-20 (Hexe-3r)	CET CAS DER CUT CHE CEE CHE CHE CHE CHE CHE CHE CHE CHE	3 4-Hanan-S-ol	040 047 055 048 059 055 048 071 100 081 041 048 059 048 055 059 051 051 050 050 047 058 047 058 048 059 050 05 038 045 052 040 056 078 059 067 081 100 039 045 050 045 059 059 030 081 041 051 044 0.0 055 0.0 055 081	4-Here-2cl 0.24 0.25 0.24 0.47 0.55 0.24 0.51 0.00 0.55 0.45 0.51 0.75 0.55 0.55 0.75 0.75 0.75 0.75 0.75
24Méhyl-2-propen-1-d	0.72 0.65 0.58 0.45 0.75 0.71 0.56 0.52 0.54 0.54 1.00 0.52 0.66 0.71 0.63 0.52 0.28 0.26 0.25 0.28 0.28 0.28 0.28 0.28	II 2-Wethyl-2-proper-1-ol	052 072 052 051 055 048 048 042 041 039 100 079 055 070 045 042 056 050 050 030 032 0.22 038 0.30 030 <b>078</b>	2-Nati#2grogur-1-ol 055 059 051 040 08 08 055 055 048 053 100 082 055 055 055 054 054 054 082 080 035 043 035 033 039 040
2Methyl-2-buten-1-ol	CAS 082 0.72 035 048 045 049 047 047 047 046 042 100 080 088 017 017 024 028 025 025 040 044 028 027 027 028	I 2-Nethy-2-buter-1-0	053 052 052 051 030 035 037 050 048 045 079 100 051 059 050 056 057 050 050 052 052 057 036 035	
3/Welhyl-20uten-1-ol	051 051 051 051 051 051 051 051 051 052 051 055 051 105 051 105 055 055 055 051 055 055	B 3-Wethyl-2-buter-1-01	051 057 052 051 051 042 045 052 050 055 055 055 055 055 055 055 05	3-Nath-Jetuan-Jet
34Methyl-3-penten-2-ol	053 057 058 075 057 076 058 078 078 076 077 083 077 100 084 019 011 078 078 078 078 078 078 078 078 078 078	2 3-Wethyl-Spentan-Bol	037 044 038 035 056 045 039 <mark>088</mark> 053 059 045 033 043 053 <mark>100 051 038</mark> 052 <b>037 034</b> 054 0.44 038 0.52 047 0.44	3-Natur3sentarized 053 055 050 080 087 073 061 056 075 062 055 057 051 055 100 050 038 038 038 038 038 035 035 037 037
44MBhyl3-penten-2-ci	035 075 088 057 071 051 050 075 082 077 082 077 083 085 084 100 022 021 025 021 031 030 025 025 026 025 026 025	4-Methyl-Spenten-Bol	035 042 036 032 035 043 038 077 039 056 043 050 042 058 092 100 028 030 028 038 038 032 0.57 044 042 047 047 055 048 032 033 034 034 031 037 030 056 056 056 058 058 058 058 058 058 058 048 040 035 048 041 038	4-NativeSentanical 058 072 082 081 081 085 086 081 077 088 084 070 076 085 080 100 028 087 080 028 083 028 035 031 032 - Promited 027 032 032 033 028 031 032 035 035 035 035 035 035 035 036 035 035 036 035 035 036 035 035 035 035
2-8ut/n-1-ol	028 025 015 015 025 020 017 020 018 015 015 015 019 014 014 011 010 054 044 044 034 028 046 057	48 2-8xtyn-1-cl	059 080 058 050 044 090 027 085 085 085 056 067 055 067 082 080 085 100 071 080 050 0.47 088 0.47 044 0.42	2-8xtpri-ci 035 030 028 018 080 028 021 025 022 020 038 028 028 029 030 028 027 047 047 037 031 070 059 052
2Pertyn-1-ol	0.24 0.22 0.21 0.25 0.27 0.22 0.25 0.27 0.25 0.25 0.25 0.21 0.25 0.21 0.25 0.41 0.54 1.00 0.77 0.52 0.42 0.25 0.25 0.25	64 2-Rentyn-3-ol	050 058 088 064 032 043 033 030 050 041 050 050 058 050 027 038 059 011 100 075 041 047 039 039 051 050	2-Refer-Sei 031 038 038 038 032 037 038 037 036 032 033 033 038 033 038 048 047 100 0.75 050 041 035 045 045 045
2498(J14-0 1-8(d)n-3-0	019 017 019 019 019 019 019 019 019 019 019 019	2 - HEN(H-1-C)     1-Bit/(H-3-C)	014 030 034 025 030 035 030 035 030 031 030 031 030 030 032 034 030 035 035 030 035 041 035 040 035 041 035 045 030	
1-Pertyn-8-d	027 028 037 038 031 038 031 039 039 038 031 035 034 030 033 035 035 030 030 034 042 047 034 100 078 048 044 0	64 1-Rentyn-Bol	030 037 038 033 047 051 052 047 053 059 032 032 032 032 041 039 044 047 041 041 057 1.00 075 0.52 057 0.55	1-Ringe-Bel 033 030 033 036 045 041 025 031 032 034 041 039 037 038 081 055 087 044 0.42 075 100 081 047 042 059
1-Hexp-3ol 2-Dedue 3-d	022 022 034 034 035 034 035 035 035 035 035 035 035 035 035 037 032 035 040 028 035 040 035 035 036 040 037 0 031 037 035 037 035 037 037 037 037 037 037 037 031 031 031 032 033 045 045 045 047 047 046 040 047	S 1-Hamp-3-cl R Referenced	030 030 032 044 045 057 071 037 043 055 038 032 032 027 033 021 035 038 039 051 050 0.75 100 0.47 053 0.57	1-Harge-1-0 028 025 025 025 025 025 025 025 025 025 025
3-HEX(N-2-0	028 025 024 020 025 025 025 025 025 025 025 025 025	6 3-Herry tr 2+cl	128 035 030 038 044 050 038 055 080 056 030 036 048 036 047 04 041 041 041 045 052 0.87 053 0.8 100 0.80	3-Harm-2-cl 033 030 025 024 034 034 025 028 024 029 028 024 029 028 034 027 021 035 035 034 027 021 035 036 024 100 055
4Hexyn-3-d	014 024 025 034 025 034 035 034 035 034 025 031 031 031 029 032 037 031 048 054 <b>035</b> 047 054 035 075 055 1	CD 4-Hewytr-B-cl	037 038 041 031 042 063 048 050 055 081 035 040 035 044 042 039 042 050 038 037 0.8 057 0.4 080 1.00	4-Haryr3-cl 032 035 030 037 035 040 034 030 039 033 040 038 034 035 037 032 035 051 052 055 051 074 065 120
(D)	Provided Comparison of Compari	(E)	Alleonia di leonia di alleonia	Current Carlos C
(D)	Sheenyn 2-d         Sheenyn 2-d         Sheenyn 2-d         Sheenyn 2-d           Lheenyn 2-d         Lheenyn 2-d         Lheenyn 2-d         Sheenyn 2-d         Sheenyn 2-d           Sheenyn 2-d </td <td>(E)</td> <td>Concern: 3 and a set of the set</td> <td>Control     Control     Contro     Contro     Control     Control     Control     Control     Con</td>	(E)	Concern: 3 and a set of the set	Control     Contro     Contro     Control     Control     Control     Control     Con
(D) Itersid Ideriel Itersiel	PECtable 1         PECtable 1           PECtable 1         PECtable 1 <t< td=""><td>(E) 3-Rependel 3-Rependel 3-Rependel 3-Rependel 3-Rependel</td><td>8         8         9         P1 unit 0           8         9         9         P1 unit 0           9         9         9         P1 unit 0           9         9         9         P1 unit 0           9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0         P2 unit 0           9         9         9         9         10 unit 0         P2 unit 0</td><td>Construction         Construction         Construction&lt;</td></t<>	(E) 3-Rependel 3-Rependel 3-Rependel 3-Rependel 3-Rependel	8         8         9         P1 unit 0           8         9         9         P1 unit 0           9         9         9         P1 unit 0           9         9         9         P1 unit 0           9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0           9         9         9         9         10 unit 0         P2 unit 0           9         9         9         10 unit 0         P2 unit 0         P2 unit 0           9         9         9         9         10 unit 0         P2 unit 0	Construction         Construction<
(D)	Control         Control           Participant         Participant           Paritipant         P	(E) 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0 2-2420-0-0-0-0 2-2420-0-0-0-0 2-2420-0-0-0-0 2-2400-0-0-0-0 2-2400-0-0-0-0 2-2400-0-0-0-0-0-0-0 2-2400-0-0-0-0-0-0-0-0-0-0 2-2400-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	Concerts         Dimensional         Concerts           3         Benophia         1         Benophia         1           3         Benophia         2         Benophia         2         Benophia           3         Benophia         3         Benophia         3         Benophia         3           4         1         Benophia         3	Composition         Composition <thcomposition< th=""> <thcomposition< th=""></thcomposition<></thcomposition<>
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(D) Mages Sel Sater Sel Sater Sel Sater Sel Mater Sel Mater Sel	Control         Control <t< td=""><td>(E)     (E)     (</td><td>Best of the second se</td><td>Construction         Construction           Image: A set of the set of the</td></t<>	(E)     (	Best of the second se	Construction         Construction           Image: A set of the
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(D)	District	(E)           (a)           (b)		Control         Control <t< td=""></t<>
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(D) Staniel				Lottom         Lottom         Lottom         Lottom         Lottom           (F)         1
(D) Paran-Jai Paran-		Control         Control           2         Advanced		Control         Control <t< td=""></t<>



Figure 6