
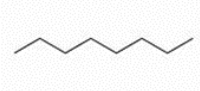


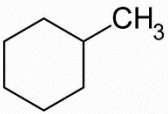
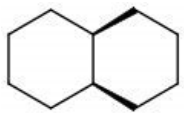
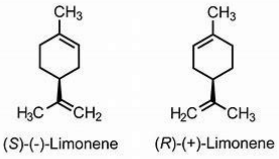
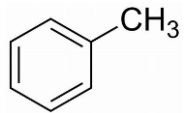
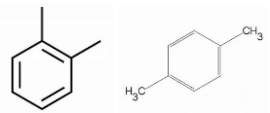
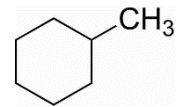


Horie#/Zumbühl # (X* GF assigned)	CHEM21 rating S,H,E #'s	STRUCTURE
1/1. Hexane n-hexane 97% extra dry	hazardous 8,7,7	
Iso-octane <i>^(hetzelfde chemical maar verschillende isomers)</i> <i>^n-octane 97 pure</i> <i>^Isooctaan PS</i> <i>^Isooctaan zuiver 1*</i>	<i>problematic (**predicted)</i>	
<i>^2,2,4,trimethylpentane</i> <i>^2,2,4,trimethylpentaan</i>		
3.Cyclohexane	problematic 6,3,7	
Methylcyclohexane, 99% (1 ltr) 3*	problematic 6,2,7	
Decahydronapthalene 98% 4*	<i>problematic (**predicted)</i>	
Limonene, 96% (¼ ltr) 5*	problematic 4,2,7	 <p>(S)-(-)-Limonene (R)-(+)-Limonene</p>
7/4. Toluene (fles ¼ ltr)	problematic 5,6,3	
8/6. Xylene (glazen fles 0,5 ltr) (o of p)	problematic 4,2,5	

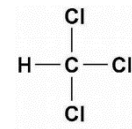
Methylcyclohexane **13***

problematic
6,2,7



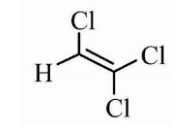
18/17. Chloroform

highly hazardous
2,7,5



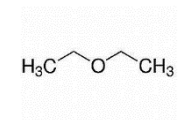
23. 1,1,2, trichloroethane
9. 1,1,1 trichloroethane

hazardous (**predicted)



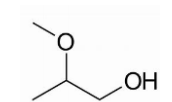
30. Diethylether

highly hazardous
10,3,7



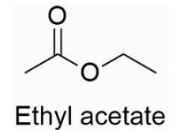
44. 1methoxy2propanol
Methoxyproxitol (around 43)

hazardous (**predicted)



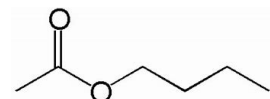
47/14. Ethylacetate
Ethylacetate for analyses

recommended
5,3,3



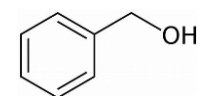
49/16. Butylacetate

recommended
4,2,3



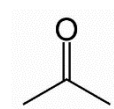
Benzyl alcohol
57*

problematic
1,2,7



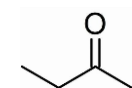
63/28. Acetone

recommended
5,3,5



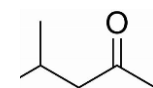
64/26. Methyl ethyl ketone
Butanone isomer. Ethylmethylketon

recommended
5,3,3



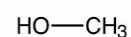
67/18. Isobutylmethylketone
Hexone isomer

recommended
4,2,3



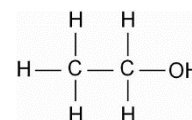
74/48. Methanol

recommended (AD)
4,7,5



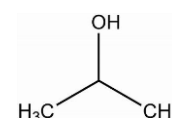
75/44. Ethanol 99,8%

recommended
4,3,3



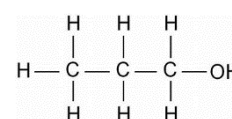
76/39 2-Propanol (isopropanol)

recommended
4,3,3



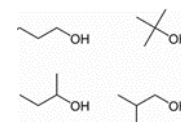
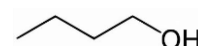
77/42. 1-Propanol

problematic
4,4,3



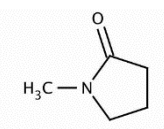
78/32. 1-butanol 99+%
specific isomer butanol 38

recommended
3,4,3



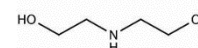
105/29. 1methyl 2pyrrolidinone

hazardous (**predicted)



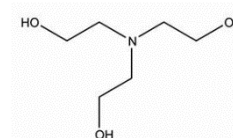
Diethanolamine
111*

hazardous (**predicted)



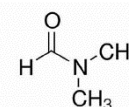
114. Triethanolamine

hazardous
6,7,3



117/31. Dimethylformamide

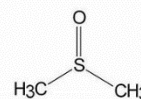
hazardous
3,9,5



123/36. Dimethylsulfoxide

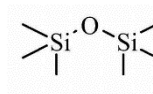
problematic

1,1,5



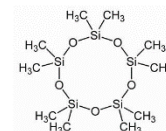
Hexamethyldisiloxane

problematic (**predicted)



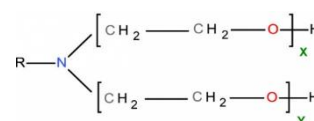
Cyclomethicone D4

problematic (**predicted)



Ethomeen C 25 (1 ltr) base

problematic (**predicted)



Mixtures

(predicted all problematic)

Ether (fles ¾ ltr)

Petroleum Spirit rectified

Terpentine (problematic) 4,2,7

White spirit

Petroleum benzine siedebereich 100 140 graden celsius (1 fles 1 ltr)

Siedegren benzin 100 140 graden celsius

Brandspiritus

Turpentine substitute

References

CHEM21 selection guide of classical- and less classical-solvents, D. Prat, A. Wells, J. Hayler, H. Sneddon, C. R. McElroy, S. Abou-Shehada and P. J. Dunn, *Green Chem.*, 2016, **18**, 288

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Materials for conservation: organic consolidants, adhesives and coatings, C. V. Horie, Butterworth-Heinemann, Amsterdam, London, 2nd ed, ISBN-10 0750669055, ISBN-13 9780750669054

Notes

**predicted – not included in CHEM21 guide so conclusion assigned by G R Fife

(X* GF assigned) – when solvent not included in Horie/Zumbühl closest to Horie number assigned by G R Fife