

RISE Rapid Substitution Tool: A quick screening tool for finding environmentally friendly, cheap and readily available solvents

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RISE Rapid Substitution Tool is a quick and easy to use tool created to facilitate the identification of environmentally friendly, cheap and readily available solvents when designing, reformulating or exchanging toxic chemicals in a product.

The tool contains searchable data on the following information: 1) price for commodity solvents; 2) odor/smell properties from several online databases; 3) safety/hazard data from Swedish, EU and USA agencies; 4) RISE internally developed method for in-silico prediction of eye irritation; as well as 5) physico-chemical properties of the enquired solvent. The tool can be efficiently combined with the Hansen Solubility Parameters in Practice (HSPiP) software to accelerate the substitution work. To demonstrate the power of this tool the substitution of a model solvent, xylene, will be showcased. Xylene is a toxic solvent for which a cheap and safe replacement is needed.

The advantage of this tool is that it combines numerous databases in one and enables to screen for a wide range of parameters in just one search. Thus, the best alternative solvents that fulfils the required properties can be quickly identified, which allows fast decision-making in the reformulation process.



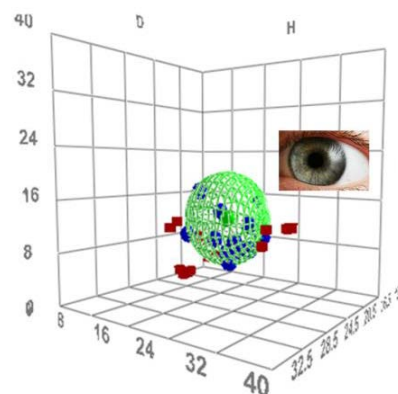
Price



Odor



Toxicology data



Eye Irritation data