

IR - Surfactants, Hummel - Wiley

Spectra - 1,030

Description

This database contains 1,030 spectra of pure and commercial surfactants first published in hard copy in *Analysis of Surfactants: Atlas of FTIR-Spectra with Interpretations* by Professor Dieter Hummel of the University of Cologne. In order to present a comprehensive database of compounds for those using surfactants, research samples and industrial surfactants were used to create the data. The majority of compounds were manufactured in Germany, where Professor Hummel worked closely with German suppliers to complete this collection.

Additional Information

This database includes the name, source of sample, technique, description, classification (in the form of the decimal system), as well as synonyms, molecular formulas, literature references, and comments when available.

Classifications

Anionics

- Carboxylates
- Soaps
- Carboxylates with Additional Heterofunctions
- Sulfonic Acids & their Salts
- Sulfonic Acids
- Nonmodified Sulfonates
- Sulfonates with Additional CHN(O) Functions
- Sulfonates with Additional CHO Functions
- Sulfuric Acid Monoesters & their Salts
- Sulfates of Alcohols & Alkylene Oxide Adducts
- Sulfation Products of Fatty Acids & their Derivatives
- Sulfates with CHNO Functions
- Alkyl & Alkylarylsulfonic Acids & their Salts
- Thiosulfuric Acid Monoesters & their Salts
- Phosphoric Acids, Partially Esterified, & their Salts
- Alkanephosphonates

Cationics

- Salts of Amines & Heterocyclics
- Quaternary Ammonium Salts
- Aliphatic Quaternary Ammonium Salts
- Aliphatic-Aromatic Quaternary Ammonium Salts
- Quaternary Ammonium Salts with Additional Heterogroups
- Salts of Quaternary Heterocyclics
- N in Aliphatic Ring
- N in Aromatic Ring

Amphoteric

- Aminocarboxylic Acid Derivatives
- Unmodified Alkyl-Substituted Aminocarboxylic Acids
- CH(N)O-Modified, Alkyl-Substituted Aminocarboxylic Acids
- Protein Hydrolysates
- Carboxybetaines
- Amine Oxides
- Sulfonic Acid Derivatives
- Sulfuric Acid Derivatives
- Phosphoric Acid Derivatives

Nonionics (without alkylene oxide adducts)

- CHN Surfactants: Fatty Amines
- CHO Surfactants
- Fatty Alcohols
- Fatty Acid Esters of Polyhydric Alcohols & Ester Alcohols, Ester Ethers
- CHNO Surfactants
- Amino Alcohols
- Amino Esters & Aminoether Esters
- Fatty Acid Amides, Alkanolamides
- Alkylated Heterocyclics

Alkylene-Oxide Adducts & their Nonionic Derivatives

- Ether-like EO Adducts
- Ester-like EO Adducts
- Amine-like EO-Adducts
- Amide-like EO-Adducts
- Propylene Oxide-Adducts
- PO-EO-Adducts

Hetero Element & Polymeric Surfactants

- Fluorine-Surfactants
- Silicon-Containing Surfactants
- Boron Surfactants
- Polymeric Surfactants

Mixtures of Surfactants

Surfactants Raw Materials, Reference SUBSTANCES

Additives

- Hydrophilic & Hydrotropic Substances
- Lipophilic Substances & Lipotropes
- Complexing Agents
- Synthetic Polymers
- Natural Polymers & their Derivatives
- Inorganic Additives
- Perborate Activators

(more)

Technique

All measurements were made at the Institute for Physical Chemistry of the University of Cologne. All spectra were recorded and normalized using a FT-IR instrument with background correction, subtraction of atmospheric absorption, and adjustments of the maximum absorbance to 1. If necessary, samples were dried before measurement, though some undried samples were included.