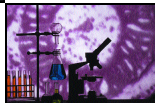


Basic Monomers & Polymers Vol. 1 (Unmodified)



4219 Basic Monomers & Polymers Vol. 1 (Unmodified) - 1,490 Spectra

Infrared spectroscopy is, perhaps, the most commonly used analytical technique for polymer and plastics analysis. Analytical applications include identification, quality control, deterioration studies, materials selection, plus other applications such as classroom instruction. These applications in nearly all cases require some type of reference spectra with which to substantiate one's analytical suspicions or, to design an analytical approach. The Basic Monomers and Polymers Volume 1 is useful in all such applications. For those doing identification, a reference spectrum is nearly always used to confirm final identification. For quality control, reference spectra are used for selecting unique absorption bands for quantitative analysis or to monitor chemical changes during processing or actual usage. Reference spectra can also be used for determining which polymeric structure is suited for either transmitting or absorbing infrared radiation in a particular spectral region. Finally, the database is particularly useful in materials selection. Here, one generally performs an initial identification by matching an unknown spectrum against a reference spectrum. Once the unknown is identified and its chemical class revealed, the database provides a collection of infrared spectra for products in that same chemical class with the same or similar characteristics as the identified material. Manufacturer source information is presented with each reference spectrum so that the availability of a selected material that matches the measured infrared spectrum can be determined by contacting the specified commercial producer.

Bio-Rad has compiled a collection of basic monomers and polymers commonly encountered in both industry and academia. This database contains 1490 infrared reference spectra selected to help satisfy a high percentage of analytical applications for this area of technology. The database contains reference spectra for materials identified by chemical name which have not been modified with any additives, although they may be copolymers or terpolymers.

"Basic" Monomers and Polymers are those which have not been modified with any additives, although they may be copolymers or terpolymers. Each infrared spectrum is assigned a chemical classification to aid the user in identification of characteristic absorption bands representative of that class. This collection includes many classic compounds, which makes it particularly useful as a reference. Each compound is identified by its chemical name.

The following additional information will also be supplied when available: chemical composition, chemical and physical properties, source of sample, technique and classification.

NOTE: Select Databases designated as Volume 1 and Volume 2 are independent of each other and do not contain duplicate spectra.

Molecular structures associated with the database are available for viewing and sub-structure searching where the search software can support it.

The following is a breakdown of the monomer and polymer classes presented in the database.

Classifications

POLYMERS

POLYETHYLENES	19	VINYL CHLORIDE HOMOPOLYMERS	9	POLYSULFONES	7
POLYPROPYLENES	16	VINYL CHLORIDE COPOLYMERS	22	ION EXCHANGE RESINS	66
POLYBUTENES AND BUTYL RUBBERS	18	POLYVINYL ALCOHOLS	17	POLYMERIZED FATS	1
POLYBUTADIENES	12	POLYVINYL ETHERS	4	UV LIGHT ABSORBERS	8
SYNTHETIC POLYISOPRENES AND NATURAL RUBBERS	4	POLYVINYL ACETALS	2	MISCELLANEOUS POLYMERS	2
ALIPHATIC HYDROCARBON COPOLYMERS	12	POLYVINYL ESTERS	13	MONOMERS	
COUMARONE-INDENE RESINS	3	POLYVINYL ACETATE COPOLYMERS	21	ALIPHATIC UNSATURATED HYDROCARBONS	15
POLYSTYRENES	20	POLYVINYLIDENE POLYMERS (EXCLUDING NITRILES)	4	CYCLIC UNSATURATED HYDROCARBONS	6
STYRENE-BUTADIENE COPOLYMERS	14	MISCELLANEOUS VINYL POLYMERS	15	AROMATIC HYDROCARBONS	11
OTHER STYRENE COPOLYMERS (EXCLUDING NITRILES)	24	NITROCELLULOSE	4	HALOGENATED HYDROCARBONS	2
OTHER AROMATIC VINYL HYDROCARBONS	5	CELLULOSE ETHERS	10	COMPOUNDS CONTAINING SILICON	5
FLUOROCARBON RESINS	15	CARBOXYMETHYL CELLULOSE AND SALTS	2	CYANATES, ISOCYANATES, NITRILE	22
CHLORINATED HYDROCARBON RESINS	15	CELLULOSE ESTERS AND MIXED ESTERS	15	ETHERS	27
SILICONE POLYMERS	17	MISCELLANEOUS CARBOHYDRATE DERIVATIVES	7	OXIDES AND PEROXIDES	35
ACRYLONITRILE-BUTADIENE-STYRENE RESINS	20	PHENOLIC RESINS	30	AMINES	122
POLYURETHANE AND URETHANE PREPOLYMERS	19	ACRYLIC COPOLYMERS (SEE ALSO STYRENE COPOLYMERS)	17	COMPOUNDS CONTAINING HALOGEN	36
BUTADIENE-ACRYLONITRILE COPOLYMERS	13	POLYACRYLIC AND POLYMETHACRYLIC ESTERS	66	COMPOUNDS CONTAINING SULFUR	66
STYRENE-ACRYLONITRILE COPOLYMERS	2	POLYACRYLIC AND POLYMETHACRYLIC ACIDS AND SALTS	10	COMPOUNDS CONTAINING PHOSPHORUS	80
OTHER NITRILE POLYMERS	8	POLYESTERS	37	ALCOHOLS AND PHENOLS	65
THIOPLASTS/POLYSULFIDES	11	POLYCARBONATES	6	ALDEHYDES, KETONES AND QUINONES	24
POLYETHERS	45	ALKYDS	20	CARBOXYLIC ACIDS	25
ANHYDRIDE POLYMERS	10	ROSIN AND ROSIN DERIVATIVES	11	ANHYDRIDES	21
UNMODIFIED EPOXY RESINS	10	AMINOPLASTS/POLYAMINES	13	ACRYLATES AND METHACRYLATES	60
MODIFIED EPOXY RESINS	37	POLYAMIDES	21	PHTHALATES	6
		POLYIMIDES	15	ESTERS	64
		POLYVINYLPIRROLIDONES	9	CARBOXYLIC ACID CHLORIDES	3
		POLYVINYLPIRIDINES	11	UREAS, AMIDES, CYANURATES	31
				ORGANOMETALLICS (Sn, Zn, Ba, Cd, etc.)	2
				CARBOXYLIC ACID SALTS	13



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