








Organic Chemistry I Lab (CHEM 315L) List of Chemicals









Chemical Name ¹	GHS Pictograms ²	Hazard Statements ³	Signal Word	NFPA Rating (H-F-I-SH)	Carcinogen	Reproductive Toxin
Acetaminophen		H302, H315, H319, H335, H411	Warning	2-0-0	No	No
Acetic anhydride		H226, H332, H330, H314, H335	Danger	3-2-1	No	No
Acetone		H225, H319, H336	Danger	1-3-0	No	No
Adipoyl chloride		H314	Danger	3-1-0	No	No
L-Alanine	None	None	None	1-1-0	No	No
Anise seeds, oil	None	H227	Warning	0-2-0	No	No
L-Arginine	None	H401	None	0-0-0	No	No
L-Arginine monohydrochloride	None	None	None	1-0-0	No	No
L-Aspartic acid	None	None	None	0-0-0	No	No
Aspirin		H302, H315, H319, H335	Warning	2-1-0	No	No
Benzoic acid		H315, H318, H373	Danger	3-1-0	No	Yes (See SDS.)
Benzoyl peroxide		H228, H302, H351, H410	Danger	1-3-4-OX	Yes (See SDS.)	No

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² Refer to Pictogram Key.

³ Refer to Hazard Statement Key.

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Caffeine		H302	Warning	2-0-0	No	No
Charcoal (activated carbon)		H373	Warning	1-1-0	No	No
L-Cysteine	None	None	None	0-0-0	No	No
L-Cystine	None	None	None	0-0-0	No	No
Dichloromethane (DCM)		H315, H319, H335, H336, H351, H373	Warning	2-0-0	Yes (See SDS.)	No
Ethanol		H225, H302, H319, H370	Danger	2-3-0	No	No
Ethyl acetate		H225, H319, H335, H336, H373	Danger	1-3-0	No	Yes (See SDS.)
Ethyl iodide (iodoethane)		H302, H315, H317, H319, H334, H335	Danger	1-0-0	Yes (See SDS.)	No
Ethylene glycol		H302, H373	Warning	1-1-0	No	Yes (See SDS.)
L-Glutamic acid	None	None	None	0-0-0	No	No
L-Glutamic acid hydrochloride		H314	Danger	2-0-0	No	No
Glycerol	None	None	None	1-1-0	No	No

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Hexamethylenediamine		H302, H312, H314, H318, H335, H402	Danger	3-2-0	No	No
Hexane , variable concentrations		H225, H304, H315, H319, H335, H336	Danger	1-3-0	No	No
L-Histidine	None	None	None	1-1-0	No	No
L-Histidine monohydrochloride	None	None	None	0-0-0	No	No
Hydrochloric acid		H290, H314, H335, H373	Danger	3-0-1	No	No
L-Hydroxyproline	None	None	None	0-0-0	No	No
L-Isoleucine	None	None	None	0-0-0	No	No
L-Leucine	None	None	None	0-0-0	No	No
L-Lysine monohydrochloride	None	None	None	0-0-0	No	No
Methanol		H224, 301, H311, H331, H335, H336, H370, H373	Danger	1-3-0	No	Yes (See SDS.)
L-Methionine	None	None	None	0-0-0	No	No
Phenacetin		H302, H350	Danger	1-0-0	Yes (See SDS.)	No

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p-Phenetidine		H302, H311, H319, H332, H334	Danger	2-1-0	No	No
L-Phenylalanine	None	None	None	0-0-0	No	No
Phthalic anhydride		H302, H315, H317, H319, H334, H335	Danger	2-1-1	No	No
L-Proline	None	None	None	0-0-0	No	No
L-Serine	None	None	None	0-0-0	No	No
Sodium acetate	None	None	None	1-1-0	No	No
Sodium bicarbonate	None	None	None	0-0-0	No	No
Sodium hydroxide		H290, H315, H318	Danger	3-0-1	No	No
Sodium sulfate, anhydrous	None	None	None	1-1-1	No	No
Stopcock grease	None	None	None	N/A	No	No
Styrene, monomer		H226, H304, H315, H319, H332, H335, H336, H350, H361, H373	Danger	3-3-2	Yes (See SDS.)	Yes (See SDS.)
Sulfuric acid, conc.		H290, H314, H335	Danger	3-0-2- W	No	Yes (See SDS.)

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L-Threonine	None	None	None	1-0-0	No	No
L-Tryptophan	None	None	None	1-1-0	No	No
L-Tyrosine	None	None	None	0-1-0	No	No
L-Valine	None	None	None	0-0-0	No	No
Water	None	None	None	0-0-0	No	No

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² Refer to Pictogram Key.

³ Refer to Hazard Statement Key.

Hazard Statement Key

	PHYSICAL HAZARDS	H241	Heating may cause a fire or explosion.	H310	Fatal in contact with skin.	H350	May cause cancer.
H200	Unstable explosive.	H242	Heating may cause a fire	H311	Toxic in contact with skin.	H351	Suspected of causing cancer.
H201	Explosive; mass explosion hazard.	H250	Catches fire spontaneously if exposed to air.	H312	Harmful in contact with skin.	H360	May damage fertility or the unborn child.
H202	Explosive; severe projection hazard.	H251	Self-heating; may catch fire	H313	May be harmful in contact with skin.	H361	Suspected of damaging fertility or the unborn child.
H203	Explosive; fire, blast or projection hazard.	H252	Self-heating in large quantities; may catch fire	H314	Causes severe skin burns and eye damage.	H362	May cause harm to breast-fed children.
H204	Fire or projection hazard.	H260	In contact with water releases flammable gases which may ignite spontaneously.	H315	Causes skin irritation.	H370	Causes damage to organs.
H205	May mass explode in fire.	H261	In contact with water releases flammable gas.	H316	Causes mild skin irritation.	H371	May cause damage to organs.
H220	Extremely flammable gas.	H270	May cause or intensify fire; oxidizer	H317	May cause an allergic skin reaction.	H372	Causes damage to organs through prolonged or repeated exposure.
H221	Flammable gas.	H271	May cause fire or explosion; strong oxidizer.	H318	Causes serious eye damage.	H373	May cause damage to organs through prolonged or repeated exposure.
H222	Extremely flammable aerosol.	H272	May intensify fire; oxidizer.	H319	Causes serious eye irritation.		ENVIRONMENTAL HAZARDS
H223	Flammable aerosol.	H280	Contains gas under pressure; may explode if heated.	H320	Causes eye irritation.	H400	Very toxic to aquatic life.
H224	Extremely flammable liquid and vapor.	H281	Contains refrigerated gas; may cause cryogenic burns or injury.	H330	Fatal if inhaled.	H401	Toxic to aquatic life.
H225	Highly flammable liquid and vapor.	H290	May be corrosive to metals.	H331	Toxic if inhaled.	H402	Harmful to aquatic life.
H226	Flammable liquid and vapor.		HEALTH HAZARDS	H332	Harmful if inhaled.	H410	Very toxic to aquatic life with long-lasting effects.
H227	Combustible liquid.	H300	Fatal if swallowed.	H333	May be harmful if inhaled.	H411	Toxic to aquatic life with long-lasting effects.
H228	Flammable solid.	H301	Toxic if swallowed.	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	H412	Harmful to aquatic life with long-lasting effects
H229	Pressurized container: may burst if heated.	H302	Harmful if swallowed.	H335	May cause respiratory irritation.	H413	May cause long-lasting harmful effects to aquatic life.
H230	May react explosively even in the absence of air.	H303	May be harmful if swallowed.	H336	May cause drowsiness or dizziness.	H420	Harms public health and the environment by destroying ozone in upper atmosphere.
H231	May react explosively even in the absence of air at elevated pressure and/or temperature.	H304	May be fatal if swallowed and enters airways.	H340	May cause genetic defects.	H361	Suspected of damaging fertility or the unborn child.
H240	Heating may cause an explosion.	H305	May be harmful if swallowed and enters airways	H341	Suspected of causing genetic defects.		

Pictogram Key

	Carcinogen, Mutagen, Reproductive toxin, Respiratory sensitizer, Target organ toxicity, Aspiration toxicity		Flammables, Pyrophorics, Self-Heating, Emits Flammable Gas, Self-Reactives, Organic Peroxides		Irritant (skin/eye), Skin sensitizer, Acute toxicity (harmful), Narcotic effects, Respiratory tract irritant, Hazardous to ozone
	Gases under pressure		Skin Corrosion/Burns, Eye Damage, Corrosive to Metals		Explosives, Self-reactives, Organic peroxides
	Oxidizers		Aquatic toxicity		Acute toxicity (fatal or toxic)