Decomposes proteins and lipids in organic tissues. Causes blindness upon contact with eyes.

NaOH dissolution in water is very exothermic. Do not store in Aluminum/glass containers.

[H290 – H314]

SODIUM HYDROXIDE

NaOH

4M ≈14%

Tech Grade

TECHNICAL DATA

Melting Point: 318°C
Molar mass: 39.9971 g/mol
Solubility: 111 g/100mL 20°C
Density: 2.13 g/cm^3
EC: 215-185-5
CAS: 1310-73-2

Decomposes proteins and lipids in organic tissues. May cause blindness upon contact with eyes.

NaOH dissolution in water is very exothermic. Do not store in Aluminum/glass containers.

[H290 – H314]

SODIUM HYDROXIDE

NaOH

2M ≈7.5%

Tech Grade

TECHNICAL DATA

Melting Point: 318°C
Molar mass: 39.9971 g/mol
Solubility: 111 g/100mL 20°C
Density: 2.13 g/cm^3
EC: 215-185-5
CAS: 1310-73-2

Decomposes proteins and lipids in organic tissues. May cause blindness upon contact with eyes.

NaOH dissolution in water is very exothermic. Do not store in Aluminum/glass containers.

[H290 – H314]

SODIUM HYDROXIDE

NaOH

1M ≈4%

Tech Grade

TECHNICAL DATA

Melting Point: 318°C
Molar mass: 39.9971 g/mol
Solubility: 111 g/100mL 20°C
Density: 2.13 g/cm^3
EC: 215-185-5
CAS: 1310-73-2

Decomposes proteins and lipids in organic tissues. May cause blindness upon contact with eyes.

NaOH dissolution in water is very exothermic. Do not store in Aluminum/glass containers.

[H290 – H314]

SODIUM HYDROXIDE
NaOH
Flakes 99.5%
Tech Grade

TECHNICAL DATA

Melting Point:	318°C
Molar mass:	39.9971 g/mol
Solubility:	111 g/100mL 20°C
Density:	2.13 g/cm^3
EC:	215-185-5
CAS:	1310-73-2

Corrosive on metals, human tissue, damages the respiratory organs, eyes, skin, and intestines.

If mixed with oxidising agents chlorine gas is released.

[H280 – H314 – H331]

HYDROCHLORIC ACID
HCl
30-32% ≈8.5M
Tech Grade

TECHNICAL DATA

Molar mass:	36.465 g/mol
Solubility:	82.3 g/100mL 20°C
Density:	1.187 g/cm^3
EC:	231-595-7
CAS:	7647-01-0

Corrosive on metals, human tissue, damages the respiratory organs, eyes, skin, and intestines.

If mixed with oxidising agents chlorine gas is released.

[H80 – H314 – H331]

HYDROCHLORIC ACID
HCl
2M ≈7%
Tech Grade

TECHNICAL DATA

Molar mass:	36.465 g/mol
Solubility:	82.3 g/100mL 20°C
Density:	1.187 g/cm^3
EC:	231-595-7
CAS:	7647-01-0

Corrosive on metals, human tissue, damages the respiratory organs, eyes, skin, and intestines.

If mixed with oxidising agents chlorine gas is released.

[H280 – H314 – H331]

ACETIC ACID

CH_3COOH

6% ≈1M

Tech Grade

TECHNICAL DATA

Melting Point:	-114.22°C
Molar mass:	36.465 g/mol
Solubility:	82.3 g/100mL 20°C
Density:	1.187 g/cm³
EC:	231-595-7
CAS:	7647-01-0

GRAS

A solution of 50g/1L has pH ≈8.6.
Decomposes at 50°C to Na_2CO_3.

SODIUM HYDROGEN CARBONATE

$NaHCO_3$

Food Grade

TECHNICAL DATA

Decomposition:	50°C
Molar mass:	84.007 g/mol
Solubility:	96 g/L 20°C
Density:	2.20 g/cm³
EC:	205-633-8
CAS:	144-55-8

GRAS

Do not mix with solid $KmnO_4$.

GLYCERIN

$C_3H_8O_3$

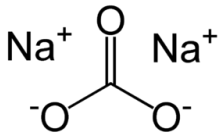
95%

Food Grade

TECHNICAL DATA

Melting Point:	18°C
Molar mass:	92.10 g/mol
Solubility:	Miscible 20°C
Density:	1.26 g/cm³
CAS:	56-81-5

Causes eye and skin irritation.



A solution of 50g/1L has pH ≈11.5.
Decomposes at 500°C to $Na_2O + CO_2$.

Insoluble in ethanol and acetone.

[H319]

SODIUM CARBONATE

(Monohydr.) Na_2CO_3

Tech Grade – E500

TECHNICAL DATA

Decomposition: >400°C
Molar mass: 124.00 g/mol
Solubility: 215 g/L 20°C
Density: 2.25 g/cm³

CAS: 497-19-8

Irritant, dessiccates moist skin. If ingested, burns and ulceration can result in the mouth and the digerent organs.

Dissolves EXOTHERMICALLY

Soluble in acetone and acetic acid.

[H319 – H316 – H302]

CALCIUM CHLORIDE

(Anhydr.) $CaCl_2$

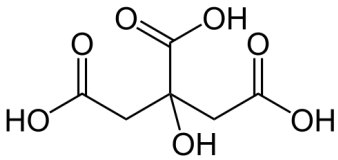
Tech Grade – E509

TECHNICAL DATA

Melting Point: 772°C
Molar mass: 110.98 g/mol
Solubility: 74.5 g/100mL 20°C
Density: 2.15 g/cm³

CAS: 10043-52-4

Causes eye and skin irritation.



Soluble in ethanol, ether, ethyl acetate.
Insoluble in chloroform and benzene.

[H318]

0.1M pH ≈2.57
0.5M pH ≈1.72
1M pH ≈1.57

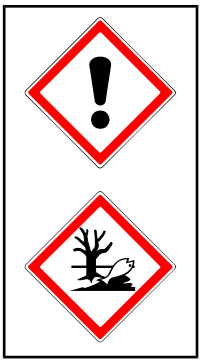
CITRIC ACID

$C_6H_8O_7$

Food Grade – E330

TECHNICAL DATA

Melting Point: 156°C
Molar mass: 192.124 g/mol
Solubility: 59 g/100mL 20°C
Density: 1.665 g/cm³
EC: 201-069-1
CAS: 77-92-9



Causes eye and skin irritation. Mildly toxic via oral ingestion.

Soluble in methanol.

Insoluble in ethanol.

[H302 – H315 – H319 – H410]

COPPER SULPHATE

(Pentahydr.) $CuSO_4$

Fertilizer

TECHNICAL DATA

Decomposition:	110°C
Molar mass:	249.685 g/mol
Solubility:	≈236 g/L 20°C
Density:	2.286 g/cm³
EC:	231-847-6
CAS:	7758-99-8

Can cause severe skin irritation, chemical burns, blindness, or lung damage.

Decomposes at ≈600°C → $CaO+H_2O$

Soluble in glycerol and acids.

Insoluble in ethanol.

[H318]

CALCIUM HYDROXIDE

$Ca(OH)_2$

Tech Grade

TECHNICAL DATA

Decomposition:	580°C
Molar mass:	74.093 g/mol
Solubility:	0.173 g/100mL 20°C
Density:	2.211 g/cm³
EC:	215-137-3
CAS:	1305-62-0

Irritant to mucoses, respiratory tract and eyes. The powder may irritate the skin. Not toxic by ingestion.

Sulfur compounds are extremely dangerous, especially H_2S, SO_2, SO_3 and H_2SO_3.

SULFUR

S_8

Fertilizer Grade

TECHNICAL DATA

Melting Point:	115.21°C
Molar mass:	32.066 g/mol
Solubility:	-
Density:	≈2 g/cm³
CAS:	7704-34-9

GRAS

SODIUM CHLORIDE

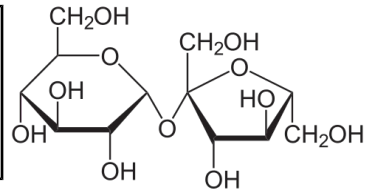
NaCl

Food Grade

TECHNICAL DATA

Melting Point:	801°C
Molar mass:	58.44 g/mol
Solubility:	358 g/L 20°C
Density:	2.165 g/cm^3
EC:	231-598-3
CAS:	7647-14-5

GRAS



The molecule is a disaccharide composed of glucose and fructose.

SUCROSE

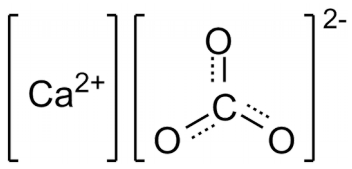
$C_{12}H_{22}O_{11}$

Food Grade

TECHNICAL DATA

Decomposition:	186°C
Molar mass:	342.30 g/mol
Solubility:	2000 g/L 20°C
Density:	1.587 g/cm^3
EC:	200-334-9
CAS:	57-50-1

GRAS



Decomposes at ≈1350°C→CaO+H_2O

CALCIUM CARBONATE

$CaCO_3$

Limestone

TECHNICAL DATA

Decomposition:	1339°C
Molar mass:	100.086 g/mol
Solubility:	0.001 g/100mL 20°C
Density:	2.711 g/cm^3
EC:	207-439-9
CAS:	471-34-1

Decomposes proteins, lipids and dehydrates organic materials. Causes fatal and irreversible damage to internal organs and eyes. Causes heat burns.

EXTREMELY EXOTHERMIC UPON CONTACT WITH WATER.

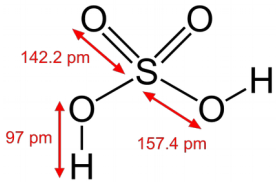
[H314 – H290]

SULFURIC ACID

H_2SO_4

1.5M ≈13%

Tech Grade



TECHNICAL DATA

Melting Point:	10°C
Molar mass:	98.079 g/mol
Solubility:	Miscible
Density:	1.84 g/cm³
EC:	231-639-5
CAS:	7664-93-9

Volatile flammable compound.

[H225]

ETHANOL

CH_3CH_2OH

95%

Food Grade

TECHNICAL DATA

Melting Point:	-114.22°C
Molar mass:	46.07 g/mol
Solubility:	Complete
Density:	0.789 g/cm³
CAS:	64-17-5

Extremely flammable. Can cause skin dryness. Generally regarded as safe.

MELTS POLYESTER AND POLYSTIRENE. TRY USE IN A HIDDEN PART FIRST.

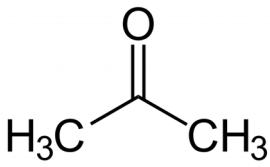
[H225 – H319 – H336 – EUH066]

ACETONE

$(CH_3)_2CO$

>98%

Tech Grade



TECHNICAL DATA

Melting Point:	-95°C
Molar mass:	58.08 g/mol
Solubility:	Miscible
Density:	0.791 g/cm³
EC:	200-662-2
CAS:	67-64-1

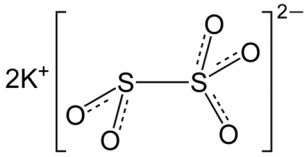
Causes skin irritation, serious eye irritation, and may cause respiratory irritation.

Decomposes at 190°C

$K_2S_2O_{5(s)} \rightarrow K_2SO_{3(s)} + SO_{2(g)}$

Reacts with acids releasing toxic gases.

[H318 – H335 EUH031]



POTASSIUM METABISULFITE

$K_2S_2O_5$

Food Grade – E224

TECHNICAL DATA

Decomposition: 190°C
Molar mass: 222.32 g/mol
Solubility: 450 g/L 20°C
Density: 0.789 g/cm³

CAS: 16731-55-8

BLUE PATENT V

Food Grade – E131

TECHNICAL DATA

Molar mass: 582.66 g/mol
CAS: 20262-76-4

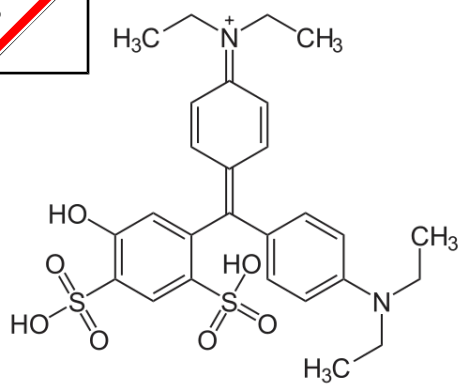
BLUE PATENT V

Food Grade – E131

TECHNICAL DATA

Molar mass: 582.66 g/mol
CAS: 20262-76-4

Can cause allergic reactions if ingested.



BLUE PATENT V

$C_{27}H_{31}N_2NaO_7S_2$

Food Grade – E131

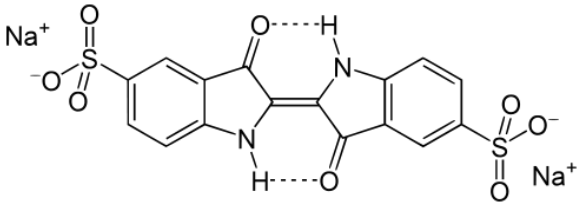
TECHNICAL DATA

Melting Point: ---
Molar mass: 582.66 g/mol
Solubility: ---
Density: ---

CAS: 20262-76-4

Harmful to the respiratory tract if inhaled. It is also an irritant to the skin and eyes.

pH indicator:
Blue <11.4, Yellow >13.0



INDIGO CARMINE

$C_{16}H_8N_2Na_2O_8S_2$

Food Grade – E132

TECHNICAL DATA

Melting Point: >300°C
Molar mass: 466.36 g/mol
Solubility: 10 g/L 25#C
Density: ---

CAS: 20262-76-4

Toxic if heated to decomposition or ingested. It's probably the less toxic lead compound.

Also called Galena.

[H302 – H332 – 360Df – H373 – H410]

LEAD SULFIDE

PbS

Battery

TECHNICAL DATA

Melting point: 1118°C
Molar mass: 239.30 g/mol
Solubility: 2.6×10^{-11} kg/L
Density: 7.60 g/cm^3
CAS: 1314-87-0

May cause cancer and genetic mutations. Deadly if inhaled. Toxic for the environment and the reproduction.

Insoluble in bases; soluble in acids.

[H350 – H341 – H361 – H330 – H372 – H410]

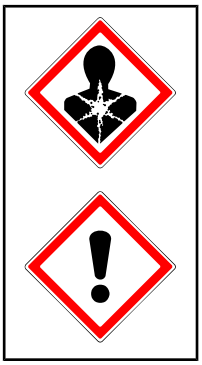
CADMIUM OXIDE

CdO

Battery

TECHNICAL DATA

Melting point: 1426°C
Molar mass: 128.40 g/mol
Solubility: -
Density: 6.95 g/cm^3
CAS: 1306-19-0



May cause cancer and genetic mutations. Unknown compond.

[H350i – H372 – H317 – H413]

NICKEL OXIDE HYDROXIDE

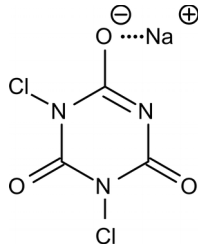
NiOOH

Battery

TECHNICAL DATA

Melting point: -
Molar mass: 91.7 g/mol
Solubility: -
Density: -
CAS: -

Irritant and dangerous for the environment. Releases Cl_2 upon contact with acids.



[H272 – H319 – H335 – H400 – H410 – H302]

SODIUM DICHLOROISOCYANURATE

$C_3Cl_2N_3NaO_3$

Tech Grade

TECHNICAL DATA

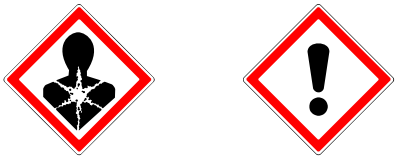
Melting point: 225°C
Molar mass: 219.95 g/mol
Solubility: 22.7 g/100mL 20°C
Density: ≈0.7 g/cm³
CAS: 2893-78-9

28 58.69

Ni

TECHNICAL DATA

Melting point: 1455°C
CAS: 7440-02-0



[H351 – H372 – H317 – H412]

82 207.2

Pb

TECHNICAL DATA

Melting point: 327.46°C
CAS: 7439-92-1

[H360 – H332 – H302 – H373 – H410]

13 26.98

Al

TECHNICAL DATA

Melting point: 660.32°C
CAS: 7429-90-5

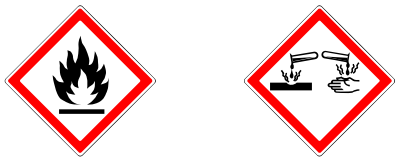
[H228 – H261]

3 6.94

Li

TECHNICAL DATA

Melting point: 180.54°C
CAS: 7439-93-2



[H260 – H314 – EUH014]

Irritant and dangerous for the environment. Releases Cl_2 upon contact with acids.

[H272 – H319 – H335 – H400 – H410 – H302]

DICHLOROISOCYANURIC ACID

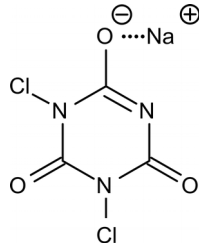
$C_3HCl_2N_3O_3$

Tech Grade

TECHNICAL DATA

Melting point: 225°C
Molar mass: 219.95 g/mol
Solubility: 22.7 g/100mL 20°C
Density: ≈0.7 g/cm^3
CAS: ?

Irritant and dangerous for the environment. Releases Cl_2 upon contact with acids.



[H272 – H319 – H335 – H400 – H410 – H302]

SODIUM DICHLOROISOCYANURATE

$C_3Cl_2N_3NaO_3$

Tech Grade

TECHNICAL DATA

Melting point: 225°C
Molar mass: 219.95 g/mol
Solubility: 22.7 g/100mL 20°C
Density: ≈0.7 g/cm^3
CAS: 2893-78-9

INDIGO CARMINE

Food Grade – E132

TECHNICAL DATA

Molar mass: 466.36 g/mol
CAS: 860-22-0

COMPOSITION:

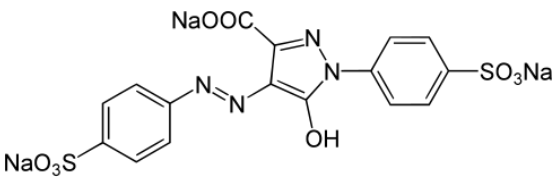
Maltodextrin, gum arabic, **E160a(ii)** (β-carotene), sunflower oil, **E307** (α-tocopherol).

β-CAROTENE YELLOW

Food Grade – E160a(ii)

Harmful to the respiratory tract if inhaled. It is also an irritant to the skin and eyes.

pH indicator:
Blue <11.4, Yellow >13.0



INDIGO CARMINE

$C_{16}H_8N_2Na_2O_8S_2$

Food Grade – E132

TECHNICAL DATA

Melting Point: >300°C
Molar mass: 466.36 g/mol
Solubility: 10 g/L 25#C
Density: ---
CAS: 20262-76-4

Irritant.

Soluble in ethanol, slightly in ether and glycerol.

[H302 – H318 – H410]

COPPER ACETATE

$Cu(CH_3COO)_2$

Tech Grade

TECHNICAL DATA

Melting Point: 115°C
Molar mass: 199.65 g/mol
Solubility: ≈200 g/L 20°C
Density: 1.882 g/cm^3

CAS: 6046-93-1

COMPOSITION:

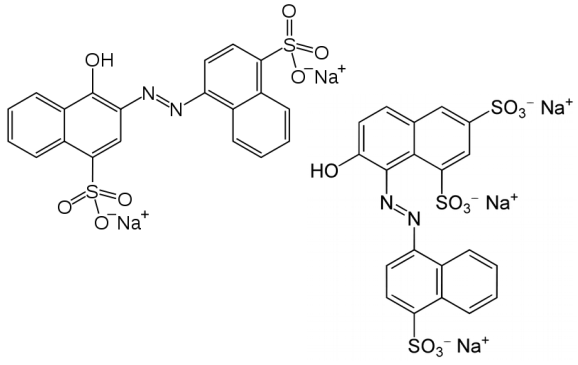
E102 (Tartrazine),
E131 (Blue Patent V).

MINT GREEN

Food Grade – E102/E131

COMPOSITION:

E122 (Azorubine),
E124 (Ponceau 4R).



STRAWBERRY RED

Food Grade – E122/E124

Can be irritant.

Is a mixture of $CuCO_3$ and $Cu(OH)_2$.

Decomposes at 290°C

$CuCO_{3(s)} \rightarrow CuO_{(s)} + CO_{2(g)}$

[H302 – H315 – H319 – H335]

COPPER CARBONATE

$CuCO_3$

Tech Grade

TECHNICAL DATA

Melting Point: 200°C
Molar mass: 123.55 g/mol
Solubility: insoluble
Density: 3.9 g/cm^3

CAS: 1184-64-1

Can be irritant. Avoid frequent overexposure.

Ethanol: 2 g/100 mL

Acetone: 1.31 g/100 mL

POTASSIUM IODIDE

KI

Analysis Grade

TECHNICAL DATA

Melting Point: 681°C
Molar mass: 166.0028 g/mol
Solubility: 140 g/100mL 20°C
Density: 3.123 g/cm^3

CAS: 7681-11-0

Can be irritant.

Is a mixture of $CuCO_3$ and $Cu(OH)_2$.

Decomposes at 290°C

$CuCO_{3(s)} \rightarrow CuO_{(s)} + CO_{2(g)}$

[H302 – H315 – H319 – H335]

BASIC COPPER CARBONATE

$CuCO_3{\cdot}Cu(OH)_2$

Tech Grade

TECHNICAL DATA

Melting Point: 200°C
Molar mass: 123.55 g/mol
Solubility: insoluble
Density: 3.9 g/cm^3

CAS: 1184-64-1

GRAS

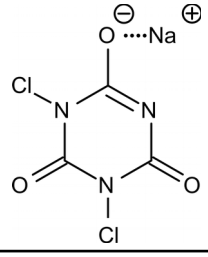
COMPOSITION:

Cane sugar(sucrose),
Molasses (3.5-6.5%).

BROWN SUGAR CRYSTALS

Food Grade

Irritant and dangerous for the environment. Releases Cl_2 upon contact with acids.



[H272 – H319 – H335 – H400 – H410 – H302]

SODIUM DICHLORO(ISO) CYANURATE

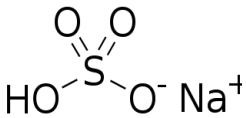
(Dihydrate) $NaC_3N_3O_3Cl_2$

Tech Grade

TECHNICAL DATA

Melting point: 225°C
Molar mass: 219.95 g/mol
Solubility: 22.7 g/100mL 20°C
Density: ≈0.7 g/cm³
CAS: 2893-78-9

Irritant to eyes and skin.



Insoluble in NH_3.
Decomposes in ethanol and at 315°C

$2NaHSO_4 \rightarrow Na_2S_2O_7 + H_2O$

1M pH <1

[H315 – H318]

SODIUM BISULFATE

(Monohydr.) $NaHSO_4$

Tech Grade – E514(ii)

TECHNICAL DATA

Decomposition: 315°C
Molar mass: 138.07 g/mol
Solubility: 67 g/100mL 20°C
Density: 1.8 g/cm³

CAS: 10034-88-5

Can be irritant to the eyes.

Insoluble in ethanol, soluble in glycerol.

Chemically very stable and unreactive. In solution has pH=7

SODIUM SULPHATE

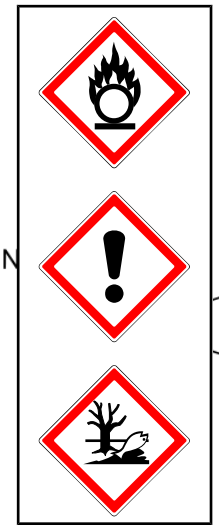
(Decahydr.) Na_2SO_4

Tech Grade

TECHNICAL DATA

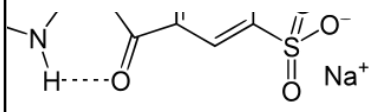
Melting Point: 32.38°C
Molar mass: 322.20 g/mol
Solubility: 44g/100mL 20°C
Density: 1.464 g/cm^3

CAS: 7727-73-3



Unknown compound. Assume same risk of NaDCCA.

Irritant and dangerous for the environment. Releases Cl_2 upon contact with acids.



COPPER DICHLORO(ISO) CYANURATE

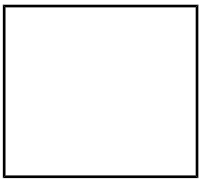
$Na_2[Cu(C_3N_3O_3Cl_2)_4]$

Tech Grade

TECHNICAL DATA

Molar mass: 219.95 g/mol
Solubility: insoluble
CAS: na - see

[H272 – H319 – H335 – H400 – H410 – H302]



Unknown compound. Contains both Cu(I) and Cu(II).

Also written **$CuSO_3{\cdot}Cu_2SO_3{\cdot}2H_2O$**

Production:

$3S_2O_5^{2-} + 3Cu_2^{+} + \%H2O \rightarrow$
$Cu_3(SO_3)_2{\cdot}2H_2O + 3SO_2 + 2H_3O^{+} + SO_4^{2-}$

Chevreul's salt

(Dihydrate) $Cu_3(SO_3)_2$

Tech Grade

TECHNICAL DATA

Molar mass: 386.8 g/mol
Solubility: insoluble
CAS: na

Can be irritant. Avoid frequent overexposure. Oxidiser.

Slightly soluble in ethanol

Soluble in glycerol, ammonia

[H272]

POTASSIUM NITRATE

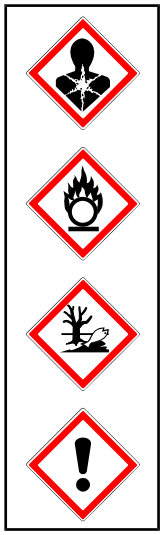
KNO_3

Fertlizer Grade – E252

TECHNICAL DATA

Melting Point: 334 °C
Molar mass: 101.1032 g/mol
Solubility: 316 g/L 20°C
Density: 2.109 g/cm^3

CAS: 7757-79-1



Being a strong oxidant, lead dioxide is a poison when ingested. Symptoms include abdominal pain and spasms, nausea, vomiting and headache. Contact with skin or eyes results in local irritation and pain. Decomposes at 375°C and 600°C according to:

$PbO_2 \rightarrow Pb_3O_4 \rightarrow PbO$

[H272 – H360 – H302+H332 – H410]

LEAD (IV) OXIDE

PbO_2

Battery

TECHNICAL DATA

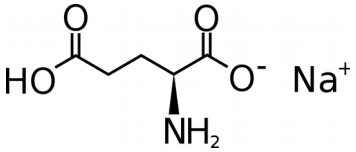
Decomposition: 290 °C
Molar mass: 239.19 g/mol
Solubility: insoluble
Density: 9.38 g/cm^3

CAS: 1309-60-0

GRAS

It is the sodium salt of Glutamic Acid (Glu), one of the most abundant non-essential amino acids.

Almost insoluble in common organic solvents.



MONOSODIUM GLUTAMATE

$NaC_5NO_4H_8$

Food Grade – E621

TECHNICAL DATA

Melting Point: 232 °C
Molar mass: 169.111 g/mol
Solubility: 74 g/100mL 20°C
Density: ≈1 g/cm^3

CAS: 142-47-2

Hoshizuna no Hama
Star Sand
Foraminifers Tests

Iriomote-jima, Yaeyama Islands,
Okinawa Prefecture, Japan □□ □□ □{ □□ □□ □

TECHNICAL DATA

Quantity: 50g
Composition: $CaCO_3$

---

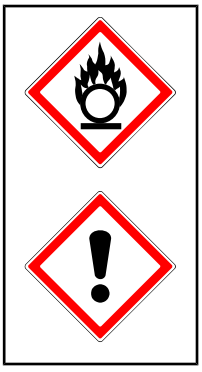
30 65.38

Zn

TECHNICAL DATA

Melting point: 419.53°C
CAS: 7440-66-6

Metallic Zn is harmless, but Zn(I) and Zn(II) compounds are toxic.



Oxidiser. Irritant if ingested.

Decomposes at 535°C and at 1000°C

(IV) (III) (II,III)
$MnO_2 \rightarrow Mn_2O_3 \rightarrow Mn_3O_4$

[272 – 302+332]

MANGANESE (IV) DIOXIDE
MnO_2
Battery

TECHNICAL DATA

Decomposition: 535 °C
Molar mass: 86.936 g/mol
Solubility: insoluble
Density: 5.026 g/cm^3

CAS: 1313-13-9

GRAS

Decomposes at 240 and 280°C

$(NH_4)_2SO_4 \rightarrow NH_4HSO_4 \rightarrow NH_3 + SO_2 + N_2 + H_2O$

Insoluble in acetone, ethanol, ether.

0.1M pH ≈5.5

AMMONIUM SULPHATE

$(NH_4)_2SO_4$

Industrial Grade – E517

TECHNICAL DATA

Decomposition:	235-280 °C
Molar mass:	132.14 g/mol
Solubility:	74.4 g/100mL 20°C
Density:	1.769 g/cm^3
CAS:	7783-20-2

Harmful if ingested. Causes serious eye irritation.

Decomposes at 340°C

$NH_4Cl \rightarrow NH_3 + HCl$

Soluble in acetone, ammonia, ethanol. Insoluble in diethyl ether and ethyl acetate.

[H303 – H319]

AMMONIUM CHLORIDE

NH_4Cl

Tech Grade – E510

TECHNICAL DATA

Decomposition:	338 °C
Molar mass:	53.49 g/mol
Solubility:	391.8 g/L 20°C
Density:	1.527 g/cm^3
CAS:	12125-02-9

Can be irritant to the eyes.

Insoluble in ethanol, acetone, soluble in glycerol.

Chemically very stable. In solution has pH=7

SODIUM SULPHATE

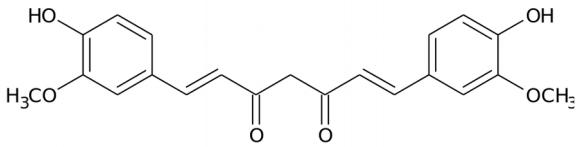
(Decahydr.) Na_2SO_4

Tech Grade

TECHNICAL DATA

Melting Point:	32.38°C
Molar mass:	322.20 g/mol
Solubility:	44g/100mL 20°C
Density:	1.464 g/cm^3
CAS:	7727-73-3

COMPOSITION:
Curcuma longa rhizome powder, Curcuminoids (≈7%) of which Curcumin (≈3%).



[H315 – H319 – H335]

TURMERIC POWDER

Food Grade

12 **24.30**

Mg

TECHNICAL DATA

-

Purity: 99.95%

Melting point: 649.85°C

CAS: 7439-95-4

[H228 – H251 – H261]

Causes serious eye irritation. May cause skin irritation.

Decomposes at 160°C yielding acetone

$Ca(CH_3COO)_2 \rightarrow CaO + CO_2 + (CH_3)_2CO$

Insoluble in acetone, ethanol.

[H315 – H319 – H335]

CALCIUM ACETATE

(Monohydr.) $Ca(CH_3COO)_2$

Tech Grade – E263

TECHNICAL DATA

Decomposition: 160 °C

Molar mass: 158.17 g/mol

Solubility: 34.7 g/100 mL 20°C

Density: 1.509 g/cm^3

CAS: 5743-26-0

47 107.86

Ag

TECHNICAL DATA

-

Purity: 1000‰

Melting point: 961.78°C

CAS: 7440-22-4

Elemental Ag is GRAS but Ag(II) compounds are toxic and can cause chronic pathologies, severe internal organ damage or death.

Irritant to eyes and skin.

Insoluble in NH_3.

Decomposes in ethanol and at 315°C

$2NaHSO_4 \rightarrow Na_2S_2O_7 + H_2O$

1M pH <1

[H315 – H318]

SODIUM BISULFATE

(Anhydrous) $NaHSO_4$

Tech Grade – E514(ii)

TECHNICAL DATA

Decomposition: 315°C

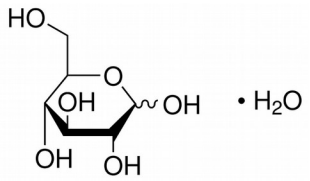
Molar mass: 138.07 g/mol

Solubility: 67 g/100mL 20°C

Density: 1.8 g/cm^3

CAS: 7681-38-1

GRAS



Sparingly soluble in methanol and ethanol.

D-GLUCOSE

(DEXTROSE Monohydrate)

$C_6H_{12}O_6{\cdot}H_2O$

Food Grade

TECHNICAL DATA

Melting point: 146-150°C

Molar mass: 198.17 g/mol

Solubility: 90 g/100mL 25°C

Density: 1.54 g/cm^3

CAS: 14431-43-7

GRAS

COMPOSITION:

G
s

GUM ARABIC

(Vachellia Acacia seyal)

Food Grade – E414

GUM ARABIC

(Vachellia Acacia seyal)

Food Grade – E414

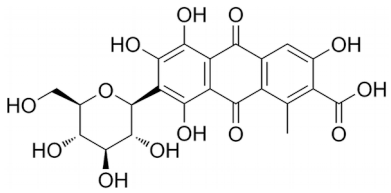
GRAS

COMPOSITION:

Gum arabic (Vachellia Acacia seyal gum).

COMPOSITION:

Maltodextrin,
E120(i) (Dactylopius coccus Extr.).



COCHINEAL RED

(Carmine Red, Carminic acid Al salt)

$C_{22}H_{20}O_{13}$

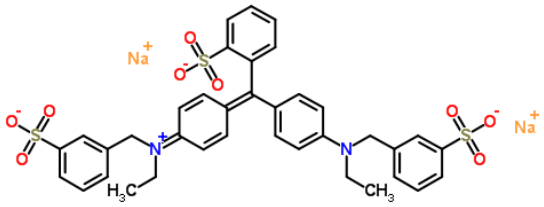
Food Grade – E120(i)

TECHNICAL DATA

Decomposition: 120-136°C
Molar mass: 492.38 g/mol
Solubility: soluble
CAS: 1260-17-9

COMPOSITION:

Maltodextrin,
E133 (Blue FCF Disodium salt).



BRILLIANT BLUE FCF

$C_{37}H_{34}N_2Na_2O_9S_3$

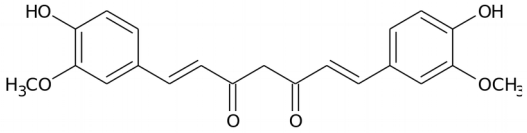
Food Grade – E133

TECHNICAL DATA

Decomposition: 120-136°C
Molar mass: 792.85 g/mol
Solubility: soluble
CAS: 3844-45-9

Turmeric Extract

Tech Grade – E100



TECHNICAL DATA:

28g Turmeric (Curcuma longa), 150mL white alcohol (20-25% Propanol, water, parfume).

Est. Curcumin in Turmeric: ≈3.14%

Est. Curcumin in extract: ≈0.586g

[H315 – H319 – H335]

COMPOSITION:

E102 (Tartrazine),
E124 (Ponceau 4R),
E110 (Sunset Y. FCF).

EGG YELLOW

Food Grade –
E102/E110/E124

COMPOSITION:

E132 (Indigotine),
E110 (Sunset Yellow FCF),
E151 (Brilliant Black BN),
E104 (Quinoline Yellow WS),
E102 (Tartrazine),
E122 (Azorubine).

ABSOLUTE BLACK

Food Grade –
E132/E110/E151
E104/E102/E122

GRAS

Mixture of stearic (C18) and palmitic (C16) acid.

Saponification index:
208.0 mgKOH/g

C12: Lauric acid $CH_3(CH_2)_{10}COOH$	max. 1%
C14: Myristic acid $CH_3(CH_2)_{12}COOH$	max. 2%
C16: Palmitic acid $CH_3(CH_2)_{14}COOH$	42-49%
C18-0: Stearic acid $CH_3(CH_2)_{16}COOH$	50-55%
C18-1: Arachidic acid $CH_3(CH_2)_{14}COOH$	max. 1%

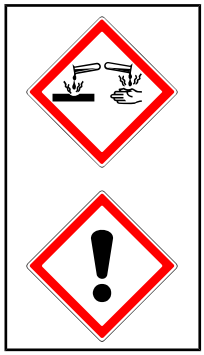
Impurities chart available.

Vegetal Stearin
C16,18 fatty acids
(palmitic, stearic)
Tech Grade

TECHNICAL DATA

Melting Point: 54/65/72.5°C
Molar mass: 891.48 g/mol
Solubility: Insoluble
Density: 0.86 g/cm^3 80°C

CAS: 555-43-1



Decomposes proteins and lipids in organic tissues. May cause blindness upon contact with eyes.

KOH dissolution in water is exothermic. Do not store in Aluminum/glass containers.

Impurities chart available.

[H290 – H302 – H314]

POTASSIUM HYDROXIDE

KOH

Flakes >90%

Tech Grade – E525

TECHNICAL DATA

Melting Point:	360°C
Molar mass:	56.11 g/mol
Solubility:	113 g/100mL 20°C
Density:	2.044 g/cm^3
EC:	215-181-3
CAS:	1310-58-3

May be irritant.

Chelates Ca^{2+} ions and is used as an anticoagulant.

In 85mL of distilled water dissolve:
1.32g of sodium citrate;
0.48g of citric acid;
1.47g of dextrose.
Add distilled water to 100mL;
Filter sterilize through 0.2um filter.
Use 0.25mL of solution for 1mL of blood.

TRISODIUM CITRATE

(Dihydrate) $Na_3(C_6H_5O_7)$

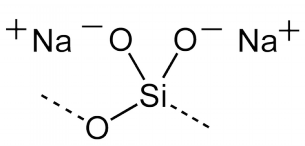
99.88% – E331(iii)

TECHNICAL DATA

Melting Point:	>300°C
Molar mass:	294.10 g/mol
Solubility:	77 g/100mL 20°C
Density:	1.7 g/cm^3
CAS:	6132-04-3

Can be irritant to the respiratory tract. Irritant for the eyes and skin.

Impurities chart available.



[H314 – H335]

SODIUM SILICATE

(Anhydrous) Na_2SiO_3

97% – E550

TECHNICAL DATA

Melting Point:	1088°C
Molar mass:	122.06 g/mol
Solubility:	22.2 g/100mL 25°C
Density:	1.15 g/cm^3
CAS:	6834-92-0

Also called Borax and sodium tetraborate. May cause intestinal distress, skin and respiratory irritation.

If C≥8.5% may damage fertility and the unborn child Cat.1B. If C≥10% is irritant for the eyes Cat.2A.

Impurities chart available.

[H314 – H335]

SODIUM BORATE

(Decahydr.) $Na_2B_4O_7$

99.9% – E285

TECHNICAL DATA

Melting Point: 743°C
Molar mass: 381.38 g/mol
Solubility: 51.4 g/100mL 25°C
Density: 1.73 g/cm^3

CAS: 1303-96-4

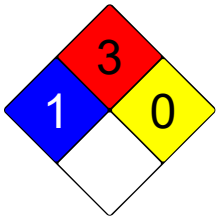
[H225 – H319 – H336 – EUH066]

ACETONE

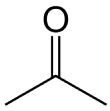
$(CH_3)_2CO$

>98%

Tech Grade



TECHNICAL DATA



Melting Point: -95°C
Boiling Point: 57°C
Molar mass: 58.08 g/mol
Solubility: Miscible
Density: 0.791 g/cm^3
CAS: 67-64-1

Corrosive on metals, human tissue, damages the respiratory organs, eyes, skin, and intestines.

If mixed with oxidising agents (e.g. $KMnO_4$) chlorine gas is released.

[H280 – H314 – H331]

HYDROCHLORIC ACID

HCl

30-32% ≈8.5M

Industrial Grade

TECHNICAL DATA

Melting Point: -114.22°C
Molar mass: 36.465 g/mol
Solubility: 82.3 g/100mL 20°C
Density: 1.187 g/cm^3
EC: 231-595-7
CAS: 7647-01-0

GRAS

Do not breathe dust and avoid contact with eyes.

Also called hydrated aluminium silicate.

Decomposes at 600°C to metakaolin;
$Al_2Si_2O_5(OH)_4 \rightarrow Al_2Si_2O_7 + 2\ H_2O$

At 950°C to an aluminium-silicon spinel;
$2\ Al_2Si_2O_7 \rightarrow Si_3Al_4O_{12} + SiO_2$

And over 1050°C to mullite and cristobalite.
$3\ Si_3Al_4O_{12} \rightarrow 2\ Al_6Si_2O_{13} + 5\ SiO_2$

Impurities chart available.

Kaolin

$Al_2Si_2O_5(OH)_4$

Cosmetic Grade – E559

TECHNICAL DATA

Category:	Phyllosilicates
Crystal system:	Triclinic
Decomposition:	550-600°C
Molar mass:	258.16 g/mol
Density:	2.58 g/cm^3
CAS:	1332-58-7

POTASSIUM HYDR.

KOH

Flakes >90%

Industrial Grade – E525

TECHNICAL DATA

Melting Point:	360°C
Molar mass:	56.11 g/mol
Solubility:	113 g/100mL 20°C
Density:	2.044 g/cm^3
EC:	215-181-3
CAS:	1310-58-3

Decomposes proteins and lipids in organic tissues. Causes blindness upon contact with eyes.

KOH dissolution in water is exothermic.
Do not store in aluminum or glass containers.

Impurities chart available.

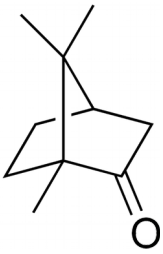
[H290 – H302 – H314]

Flammable. Irritant if inhaled and toxic if ingested.

Burns decomposing into:
$2\ C_{10}H_{16}O + 27\ O_2 \rightarrow$
$20\ CO_2 + 16\ H_2O$

Solubility in:
Acetone: ~2.5 kg/1L
Ethanol: ~1.0 kg/1L
Diethyl ether: ~2.0 kg/1L
Chloroform: ~1.0 kg/1L

[H228 – H302 – H330 – H315 – H319 – H335 – H370 – H413]



Camphor

(Bornan-2-one)

$C_{10}H_{16}O$

Industrial Grade

TECHNICAL DATA

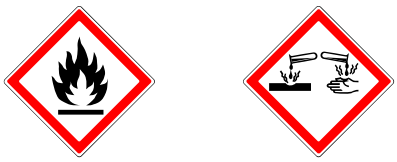
Melting Point:	175-177°C
Molar mass:	152.23 g/mol
Solubility:	0.12 g/100mL 20°C
Density:	0.990 g/cm³
EC:	200-945-0
CAS:	76-22-2

3 6.94

Li

TECHNICAL DATA

Melting point:	180.54°C
CAS:	7439-93-2



[H260 – H314 – EUH014]

12 24.30

Mg

TECHNICAL DATA

-

Purity: 99.95%

Melting point: 649.85°C

CAS: 7439-95-4

[H228 – H251 – H261]

12 24.30

Mg

TECHNICAL DATA

-

Purity: 99.95%

Melting point: 649.85°C

CAS: 7439-95-4

[H228 – H251 – H261]

12 24.30

Mg

TECHNICAL DATA

-

Purity: 99.95%

Melting point: 649.85°C

CAS: 7439-95-4

[H228 – H251 – H261]

12 24.30

Mg

TECHNICAL DATA

-

Purity: 99.95%

Melting point: 649.85°C

CAS: 7439-95-4

[H228 – H251 – H261]

Paper Chromatography Solvent A

COMPOSITION:

50% Distilled Water,
50% Acetone (>98%).

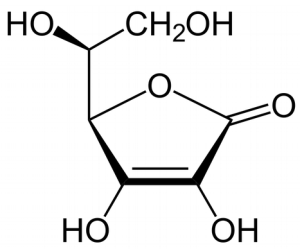
Flammable and irritant.

[H225 – H319 – H336 – EUH066]

GRAS

Doses of more than 1g/day may cause abdominal pain, nausea, diarrhea and esophageal ulcers.

LD_{50}: 11.9 g/kg (oral, rat)



L-ASCORBIC ACID

(Vitamin C) – $C_6H_8O_6$

99.8%

Food Grade – E300

TECHNICAL DATA

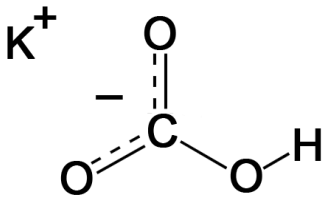
Decomposition: 190°C
Molar mass: 176.12 g/mol
Solubility: 33.0 g/100mL 20°C
Density: 1.65 g/cm^3
EC: 200-066-2
CAS: 50-81-7

GRAS

GRAS

Impurities chart available.

LD_{50}: >2000 mg/kg (rat, oral)



POTASSIUM BICARBONATE

$KHCO_3$ – DAB – E501(ii)

TECHNICAL DATA

Decomposition: 292°C
Molar mass: 100.115 g/mol
Solubility: 33.7 g/100mL 20°C
Density: 2.17 g/cm³
EC: 206-059-0
CAS: 298-14-6

Irritant and dangerous for the environment. Releases Cl_2 upon contact with acids. Assume same risk as NaDCC and DCCA.

Soluble in acetone, chlorocarbons and acetonitrile.

[H272 – H319 – H335 – H400 – H410 – H302]

TRICHLORO ISOCYANURIC ACID

$C_3Cl_3N_3O_3$

Tech Grade

TECHNICAL DATA

Melting point: 246°C
Molar mass: 232.41 g/mol
Solubility: 0.2 g/100mL 20°C
Density: 2.19 g/cm³
CAS: 87-90-1

CuNaDCC

$Na_2[Cu(C_3N_3O_3Cl_2)_4]$

AVVERTENZE

Non compatibile con acidi
Irritante

Ossido di Alluminio
Allumina

Al_2O_3

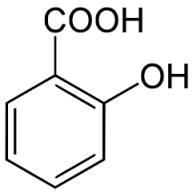
SPECIFICHE

Fe2O3 stim. 0.5%
pH ≈6.0

Acetone: 39.6 g/100g (23 °C)
Water: 1.24 g/L (0 °C)
2.48 g/L (25 °C)
4.14 g/L (40 °C)
17.41 g/L (75 °C)
77.79 g/L (100 °C)
Methanol: 40.67 g/100g (−3 °C)
62.48 g/100g (21 °C)

Soluble in ether, CCl_4, benzene, propanol, acetone, ethanol, oil of turpentine, toluene, olive oil, chloroform.

[H302 – H318]



Salycilic Acid

(2-hydroxybenzoic acid)

$C_7H_6O_3$

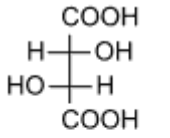
TECHNICAL DATA

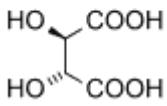
Melting Point: 158.6°C
Sublimation point: 76°C
Molar mass: 138.12 g/mol
Solubility: 2.48 g/L 25°C
77.79 g/L 100°C
Density: 1.443 g/cm³
CAS: 69-72-7

May cause moderate skin and severe eye irritation.

Do not breathe dust.

LD_{50}: 7.5g/kg (human, oral)





[H319]

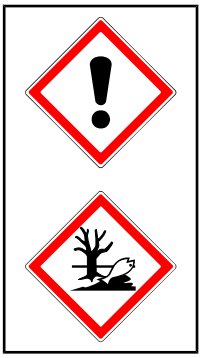
L(+)TARTARIC ACID

C_4H_6O

Food Grade – E334

TECHNICAL DATA

Melting point: 171-174°C
Molar mass: 150.087 g/mol
Solubility: 133.0 g/100mL 20°C
Density: 1.76 g/cm³
EC: 200-066-2
CAS: 526-83-0



Irritant and toxic. Very toxic for aquatic environments.

Methanol: 68 g/100 mL (15 °C)

Ethanol: 53 g/100 mL (15 °C)

Soluble in acetone

[H302 – H315 – H319 – H410]

COPPER CHLORIDE

(Dihydrate) $CuCl_2$

Industrial grade

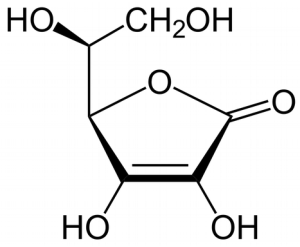
TECHNICAL DATA

Dehydration: 100°C
Melting point: 498°C
Molar mass: 170.48 g/mol
Solubility: 75.7 g/100mL 25°C
Density: 2.51 g/cm³
CAS: 10125-13-0

GRAS

Doses of more than 1g/day may cause abdominal pain, nausea, diarrhea and esophageal ulcers.

LD_{50}: 11.9 g/kg (oral, rat)



L-ASCORBIC ACID

(Vitamin C) – $C_6H_8O_6$

99.8%

Food Grade – E300

TECHNICAL DATA

Decomposition:	190°C
Molar mass:	176.12 g/mol
Solubility:	33.0 g/100mL 20°C
Density:	1.65 g/cm³
EC:	200-066-2
CAS:	50-81-7

Highly toxic by inhalation and ingestion; may cause damage to the unborn child; probably carcinogenic to humans; highly toxic to aquatic environments; causes severe long-term adverse and chronic cumulative effects.

Nitric acid: insoluble
Ethanol: 0.04 g/100 mL
Methanol: 1.3 g/100 mL

A 20% aqueous solution has pH 3.0-4.0

[H272 – H360 – H332 – H302 – H318 – H373 – H410]

LEAD (II) NITRATE

$Pb(NO_3)_2$

Industrial grade

TECHNICAL DATA

Decomposition:	270 °C
Molar mass:	331.209 g/mol
Solubility:	52 g/100 mL 20 °C
Density:	4.53 g/cm³
CAS:	10099-74-8

GRAS

Mixture of stearic (C18) and palmitic (C16) acid.

Saponification index: 208.0 mgKOH/g

C12: Lauric acid $CH_3(CH_2)_{10}COOH$	max. 1%
C14: Myristic acid $CH_3(CH_2)_{12}COOH$	max. 2%
C16: Palmitic acid $CH_3(CH_2)_{14}COOH$	42-49%
C18-0: Stearic acid $CH_3(CH_2)_{16}COOH$	50-55%
C18-1: Arachidic acid $CH_3(CH_2)_{14}COOH$	max. 1%

Impurities chart available.

Vegetal Stearin

C16,18 fatty acids

(palmitic, stearic)

Tech Grade

TECHNICAL DATA

Melting Point:	54/65/72.5°C
Molar mass:	891.48 g/mol
Solubility:	Insoluble
Density:	0.86 g/cm³ 80°C
CAS:	555-43-1

α-D-GLUCOSE

(Dextrose monohydrate, α-D-glucopyranose)

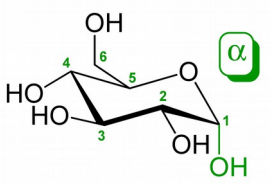
$C_6H_{12}O_6$ - Food Grade

TECHNICAL DATA

Melting point: 146-150°C
Molar mass: 198.17 g/mol
Solubility: 90 g/100mL 25°C
Density: 1.54 g/cm^3

CAS: 14431-43-7

GRAS



Sparingly soluble in methanol and ethanol.

Is a reducing monosaccharide.

GRAS

Decomposes at 240 and 280°C

$(NH_4)_2SO_4 \rightarrow NH_4HSO_4 \rightarrow NH_3 + SO_2 + N_2 + H_2O$

Insoluble in acetone, ethanol, ether.

0.1M pH ≈5.5

AMMONIUM SULPHATE

$(NH_4)_2SO_4$

Industrial Grade – E517

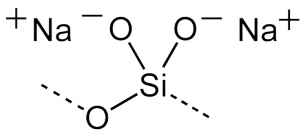
TECHNICAL DATA

Decomposition: 235-280 °C
Molar mass: 132.14 g/mol
Solubility: 74.4 g/100mL 20°C
Density: 1.769 g/cm^3

CAS: 7783-20-2

Can be irritant to the respiratory tract.
Irritant to the eyes and skin.

Impurities chart available.



[H314 – H335]

SODIUM SILICATE

(Anhydrous) Na_2SiO_3

97% – E550

TECHNICAL DATA

Melting Point: 1088°C
Molar mass: 122.06 g/mol
Solubility: 22.2 g/100mL 25°C
Density: 1.15 g/cm^3

CAS: 6834-92-0

ACETONE IMPURO

$(CH_3)_2CO$

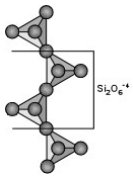
Utilizzato per lavaggio sali

EC: 200-662-2
CAS: 67-64-1

[H225 – H319 – H336 – EUH066]

Augite

Pirosseno Inosilicato (Igneo Mafico)



Monte Vesuvio (1'000-1'200 m), Napoli.

TECHNICAL DATA

Sistema Cristallino: Monoclino prismatico
Durezza (Mohs): 5.5-6.0
Composizione: (Ca,Na)(Mg,Fe,Al,Ti)$(Si,Al)_2O_6$
Lavati e sabbiati con HCl, H2O2, HNO3, HF (dil).

Fatal in contact with skin or if ingsted; carcinogenic Cat. Carc.-Mut. 1B; may cause hereditble genetic damage, may impair fertility and harm the unborn child; highly toxic to aquatic environments with long-asting effect; causes damage to organs through prolonged or repeated exposure; may cause chronic allergic reactions; corrosive.

Keep away from **organics**, reductants, acids, bases.

[H272 – H301 – H310+H330 – H314 – H317 – H334 – H340 – H350 – H360FD – H372 – H410 – H411]

POTASSIUM DICHROMATE(VI)

$K_2Cr_2O_7$ 0.1N (1/60M)

Lab Grade – NORMEX

TECHNICAL DATA

Molar mass: 294.185 g/mol
Density: 1.000 g/cm^3
LD_{50}: 14-25 mg/kg (oral,rat)

CAS: 7778-50-9