A GUIDEBOOK of
TOXIC EFFECTS and IMMEDIATE ACCIDENTAL REMEDIES of CHEMICALS AVAILABLE in the CHEMISTRY LABORATORY

COMPILED by: Third Semester Chemistry Honours Students, 2020-2021
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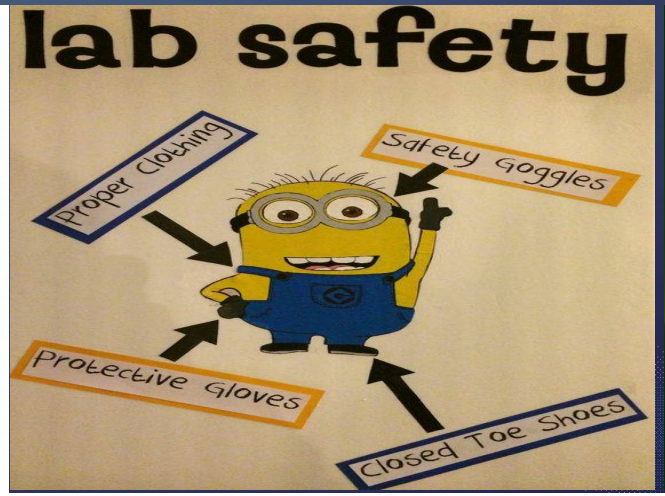

INORGANIC REAGENTS

SL No.	Name of the chemicals	Toxic or Not	Toxicity	Remedies
1.	Ammonium Fe (II) sulphate	Yes	a) It causes skin burns and eye damage. b) It causes respiratory irritation. c) After ingestion, it causes nausea, vomiting and diarrhoea.	a) Wash hands and other exposed areas by mild soap and water. b) Don't breathe mist, vapours c) Wash exposed skin thoroughly after handling.
2.	Ammonium Fe (III) sulphate	Yes	a) It absorbs through the skin. Dermal contact, eye contact, inhalation, ingestion. b) It is toxic to kidneys, liver.	a) After contact with skin, wash immediately with plenty of water. b) After inhalation allow the victim to rest in a well-ventilated area.
3.	Ammonium carbonate	Yes	a) Contact with it can irritate the skin and eyes. b) Inhaling ammonium carbonate can irritate the nose, throat and lungs causing coughing or shortness of breath.	a) Wear gloves and proper clothing to avoid skin contact with ammonium carbonate. b) Wear eye protection with side shields or goggles.
4.	Ammonium oxalate	Yes	a) It causes respiratory irritation after inhalation. b) It causes serious eye irritation after eye contact. c) Swallowing a small quantity of this material will result in serious health hazards.	a) Remove victim to fresh air and keep at rest in a position comfortable for breathing. b) Rinse cautiously with water for several minutes. c) Rinse mouth to obtain emergency medical attention.
5.	Ammonium heptamolybdate	Yes	a) It is harmful if swallowed, causes skin irritation. b) It causes nausea, headache, shortness of breath. c) It damages respiratory system	a) Don't eat or drink while handling the substance. b) Wash hands with water or Dettol after working with it. c) Use mask while it is used.
6.	Ammonium sulphate	Yes	a) Ingestion causes irritation to the gastrointestinal tract. It presents little toxicity unless large amounts are ingested, in which case, vomiting and diarrhoea are likely. b) Skin and eye contact causes irritation to skin and eyes. Symptoms include redness, itching, and pain.	a) Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. b) Immediately flush skin and eyes with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse.
7.	Ammonium dichromate	Yes	a) Ammonium Dichromate is a carcinogen in humans. It has been shown to cause lung and stomach cancers by long term exposure. b) Ammonium Dichromate may cause an asthma-like allergy. Future exposure can cause asthma attacks with shortness of breath, wheezing, coughing or chest tightness.	a) Immediately flush with large amounts of water for at least 30 minutes, lifting upper and lower lids. Remove contact lenses, if worn, while flushing. Seek medical attention. b) Remove the person from exposure. Begin artificial respiration if breathing has stopped and CPR if necessary. Transfer promptly to a medical facility.

8.	Ammonium iodide	Yes	a) Ingestion may cause irritation of the digestive tract. Chronic ingestion of iodides during pregnancy has resulted in foetal death, severe goitre, and retinoid appearance of the new-born. b) May cause eye and skin irritation if exposed.	a) Never give anything by mouth to an unconscious person. Do not induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupful of milk or water. b) Flush eyes and skin with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
9.	Ammonium thiocyanate	Yes	a) Contact can irritate and burn the skin and eyes. Breathing Ammonium Thiocyanate can irritate the nose and throat. b) Repeated exposure can cause headache, nausea, vomiting, loss of appetite and weight loss. Ammonium Thiocyanate can cause confusion, dizziness, convulsions, anxiety, and even unconsciousness and death.	a) Remove the person from exposure. Begin rescue breathing if breathing has stopped and CPR if heart action has stopped. Transfer promptly to a medical facility. b) Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.
10.	Ammonium hydrogen orthophosphate	Yes	a) On contact with skin and eyes it can cause irritation, itching and redness. b) On inhalation it can cause irritation in nasal tract and lungs.	a) Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice. b) Remove person to fresh air and keep comfortable for breathing. Call a POISONCENTER/doctor if you feel unwell.
11.	Ammonium bromide	Yes	a) This material can cause eye irritation and damage in some persons. b) This material can cause inflammation of the skin on contact in some persons.	a) If this product in comes contact with the eye ensure complete irrigation by keeping eyelids apart and away from the eye. b) If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear passage of breathing.
12.	Ammonium ceric nitrate	Yes	a) Causes eye and skin irritation. May be harmful if absorbed through the skin. b) Harmful if swallowed. May cause irritation of the digestive tract and can lead to methemoglobinemia	a) Flush eyes with plenty of water for at least 15 mins, lifting the upper and lower eyelids. b) In case of inhalation remove from exposure and move to fresh air, if not breathing give artificial respiration.
13.	Ammonium acetate	Yes	a) May cause skin irritation. May be harmful if absorbed through the skin. b) May cause respiratory tract irritation. May be harmful if inhaled.	a) Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water. b) Remove from exposure and move to fresh air immediately. If breathing is difficult, gives oxygen.
14.	Antimony	Yes	a) It can cause heart problems. It can damage the heart muscle and cause changes in electrocardiogram (ECG) readings.	a) Several treatment processes have been applied for the removal of antimony from polluted water, such as reverse osmosis, biosorption, adsorption. b) Contact health department with health concerns.

			b) High level of antimony in drinking water can cause vomiting and abdominal pain.	
15.	Ammonium bifluoride	Yes	a) Contact can severely irritate and burn the skin and eye with possible eye damage. b) High exposure can cause nausea, vomiting and loss of appetite.	a) Wear impact resistant eye protection with side shields or goggles. b) Avoid skin contact with ammonium bifluoride. Wear protective gloves and clothing
16.	Aluminium phosphate	Yes	a) Inhalation-cough b) Eye- Redness	a) Avoid inhalation of dust. b) Wear safety goggles.
17.	Aluminium oxide	Yes	a) Inhalation-cough b) Eye- Redness	a) Use local exhaust or breathing protection. b) Wear safety goggles or eye protection in combination breathing.
18.	Aluminium sulphate	Yes	a) Inhalation: Cough. Sore throat b) Ingestion: Burning sensation in the throat and chest. Abdominal pain. Nausea. Vomiting. Diarrhoea.	a) Avoid inhalation of dust. Use local exhaust or breathing protection. b) Do not eat, drink, or smoke during work
19.	Aluminium nitrate	Yes	a) Aluminium Nitrate can cause skin irritation. b) Inhaling- Aluminium Nitrate can irritate the nose, throat and lungs causing coughing, wheezing and/or shortness of breath.	a) Wear protective gloves/protective clothing/eye protection/face protection. b) Do not eat, drink or smoke when using this product
20.	Acetic acid	Yes	a) Inhalation: Sore throat. Cough. Burning sensation. Headache. Dizziness. Shortness of breath. Laboured breathing. b) Skin: Pain. Redness. Skin burns. Blisters.	a) Use ventilation, local exhaust or breathing protection. b) Protective gloves. Protective clothing
21.	Ammonium solution	yes	a) Exposure to this chemical cause injury and burns. b) Swallowing it may cause corrosive damage to the mouth, throat and stomach.	a) Wash the area of contact with large amounts of water. (b)If irritation occurs, gently blot or brush away the excess chemical and flush it with water.
22.	Barium sulphate	Yes	a) Skin may cause irritation. b) Eyes may cause irritation	a) Skin contact: wash off immediately with plenty of water for at least 15 mins. b) Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 mins

23.	Barium nitrate	Yes	a) Inhalation may cause irrigation to the respiratory tract. b) Skin or eye contact is less harmful than ingestion or inhalation, it can result in irritation itching, redness and pain.	a) The occupational Safety and health administration and the national Institute for health and occupational Safety have set occupational exposure limit at 0.5mg/meter^3 over an eight-hour time -weighted average
24.	Barium chloride	Yes	a) Eye., skin and mucus membrane irritant. b) May be fatal if inhaled, swallowed or adsorbed through the skin c) poisoning may affect the kidneys, cardiovascular and central nervous system.	a) Sodium sulphate and magnesium sulphate are potential antidote because they are form barium sulphate which is non-toxic.
25.	Brass	Yes	a) Brass is toxic to bacteria via the oligodynamic effect. The exact mechanism of action is unknown. b) common marine antifouling agent. c) Damage gills, liver, kidneys and nervous system of aquatic life. d) Ingestion includes vomiting, hypotension, jaundice, coma etc.	a) In case of poisoning, penicillamine is the drug of choice and dimer carol, a heavy metal cheating agent is often administrated.
26.	Bismuth sulphate	Yes	a) It can cause black tongue and black stools in users. b) It can neurotic, causing encephalopathy.	a) Avoid long term uses.
27.	Bismuth sulphide	Yes	a) Skin may cause irritation. b) Eyes may cause irritation	a) Skin contact: wash off immediately with plenty of water for at least 15 mins. b) Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 mins
28.	Bismuth nitrate	Yes	a) If in eyes, causes eye irritation. b) If inhaled, causes irritation to respiratory system.	a) Following inhalation, provide fresh air in all cases of doubt or when symptoms persist, seek medical advice. b) Following skin contact Rinse skin with water/shower.
29.	Borax	Yes	a) Eye irritation or Skin rash. b) Mouth infection/ vomiting	a) Avoid contact with nose, mouth, and eyes. b) Keeping products out of reach of children's or pets.
30.	Copper sulphate	Yes	a) Can cause serious eye irritation. b) With exposures, shock and death can occur.	When handling copper sulphate, boots, gloves and goggles should be worn at all times to minimize the risk for exposure or ingestion.

31.	Copper carbonate	Yes	a) Copper carbonate is an eye irritant. b) May irritate skin.	a) Use in a well-ventilated area. b) Avoid contact with eyes, skin and clothing.
32.	Copper Phosphate	Yes	a) Accidental ingestion of the material may be damaging to the health of the individual containing nausea, vomiting and burning feeling in upper stomach region. b) In contact with eye causes eye irritation and damage in some person.	a) If swallowed do not induce vomiting. If vomiting occurs, lean the person forward or place on left side to maintain open air way. b) In case of contact with eyes, ensure complete irrigation of the eye by running water and moving eyelids by occasionally lifting the upper and lower lids.
33.	Copper Chloride	Yes	a) Contact can irritate and burn the skin and eyes with possible eye damage. b) Breathing copper chloride can irritate the nose, throat and stomach causing salivation, nausea, vomiting, stomach pain and lungs causing toughness and wheezing.	a) On skin contact with copper chloride, immediately wash with large amount of water to remove the chemical. b) All protective clothing (suits, gloves, footwear, headgear etc.) must be worn and impact resistant eye protection with side shields or goggles must be used while handling copper chloride.
34.	Copper Acetate	Yes	a) Contact can irritate and burn the skin and eyes. In some person it may causes it may cause skin allergy. b) Inhalation of cupric acetate can cause a headache, nausea, vomiting, diarrhoea and abdominal pain. It may also affect the liver and kidneys.	a) In case of eye contact the eye is flushed with large amount of water for at least 15 minutes, lifting upper and lower eye lids. b) In case of skin contact the contaminated skin is washed with large amount of water and soap.
35.	Copper Metal Powder	Yes	a) Exposure by inhalation (large quantity) will produce symptoms called metal fume fever with influenza type symptoms which last for about 24-48 hours. b) Dust of copper metal powder irritates nose and trachea. In certain individuals skin contact for long periods may cause irritation and possible dermatitis.	a) in case of skin contact it is washed with mild soap and water. In case of eye contact, the eye is rinsed for several minutes under running water. b) Wearing goggle or face shield while handling copper metal powder it can be prevented from enter the eyes
36.	Calcium chloride	Yes	Inhalation caused cough. Sore throat Burning sensation Skin burns, dry skin. Ingestion caused burns in mouth.	Use local exhaust or breathing protection, protective gloves. Do not eat, drink, or smoke during work.

37.	Calcium sulphate		Inhalation caused Cough. Redness, abdominal pain.	Use local exhaust or breathing protection, protective goggles. Do not eat, drink or smoke during work.
38.	Calcium hydrogen orthophosphate	No		
39.	Calcium hydrogen phosphate	No		
40.	Calcium nitrate	Yes	Cough, sore throat Redness of eyes etc.	Use local exhaust or breathing protection. Protective gloves. Wear safety spectacles. Do not eat, drink, smoke during work.
41.	Cobalt chloride	Yes	a) Non-combustible, gives off irritating or toxic fumes in a fire.	Use local exhaust or breathing protection, protective goggles. Do not eat, drink or smoke during work.
42.	Cobalt nitrate	Yes	Non-combustible but enhances combustion of other substances. Gives off irritating or toxic fumes in a fire.	Use local exhaust or breathing protection, protective goggles. Do not eat, drink or smoke during work.
43.	Cadmium carbonate	Yes	Cough, sore throat Redness of eyes etc.	Use local exhaust or breathing protection, protective goggles. Do not eat, drink or smoke during work.
44.	Chromium sulphate	Yes	Can cause skin and eye redness throat pain.	Not to contact with combustible substances or reducing agents. Use a closed ventilation.
45.	Chromium trioxide	Yes	Can cause skin and eye redness throat pain.	Not to contact with combustible substances or reducing agents. Use a closed ventilation.
46.	Ferus (iron)sulphide	No		
47.	Ferrous (iron) sulphate heptahydrate	Yes	The substance is toxic to liver. kidneys, cardiovascular system, central nervous system.	Keep containers tightly closed in a dry, cool and well-ventilated place, do not get in eyes, on skin or on clothing.
48.	Ferric (III) chloride	Yes	It may cause irritation to the mouth and stomach. dust irritates eyes. prolonged contact with skin causes irritation and burns.	Avoid any skin contact, runoff from fire control or dilution water may be corrosive.
49.	Ferric oxide	Yes	Ferric oxide can affect you when you breathed in.	Prolonged or repeated contact can discolour the eyes causing permanent iron staining

50.	Hydrochloric acid	Yes	a) It causes pain, difficulty swallowing, nausea and vomiting. b) Ingestion of conc. HCl can cause severe corrosive injury to the mouth, throat oesophagus, and stomach, with bleeding, perforation, scarring, or stricture formation as potential sequelae.	a) Running cool water over the affected area for 10 minutes can give relief. b) It is advised to remove any clothing or jewellery that came in contact with the acid.
51.	Hydrogen peroxide	Yes	It is irritating to mucosal tissue and may cause vomiting and diarrhoea.	There are many reducing agents that help in neutralizing the effect of hydrogen peroxide such as sodium sulphite, sodium thiosulfate and oxalic acid.
52.	Lead carbonate	Yes	This produces toxic fumes of lead oxide. Reacts violently with fluorine. This generates fire hazard.	The first step in treating lead poisoning is to remove the source of the contamination. If you can't remove lead from your environment, you might be able to reduce the likelihood that it will cause problems.
53.	Lead acetate	Yes	Lead is a cumulative poison and exposure even to small amounts can raise the body's content to toxic levels. The symptoms of chronic exposure are like those of ingestion poisoning; restlessness, irritability, visual disturbances, hypertension and Gray facial colour may also be noted	Doctors treat adults with lead levels greater than 45 mcg/dL of blood and children who can't tolerate the drug used in conventional chelation therapy most commonly with a chemical called calcium disodium ethylenediaminetetraacetic acid (EDTA). EDTA is given by injection
54.	Lead nitrate	Yes	This produces toxic fumes of lead oxide. Reacts violently with fluorine. This generates fire hazard.	Wear protective gloves, rinse skin with plenty of water or shower, wear eye protection equipment
55.	Lead chloride	Yes	This produces toxic fumes of lead oxide. Reacts violently with fluorine. This generates fire hazard.	Wear protective gloves, rinse skin with plenty of water or shower, wear eye protection equipment
56.	Magnesium carbonate	Yes	Cough, eye irritation, severe diarrhoea, itching.	Wear protective gloves, rinse skin with plenty of water or shower, wear eye protection equipment.
57.	Manganese dioxide	Yes	Ingestion, inhalation, may causes irritation in eye and skin.	Wash contaminated clothes as soon as possible, use chemical safety googles, wear protective gloves.
58.	Manganous sulphate	Yes	Causes Parkinson disease such as shaking(tremors), it is unsafe if it is inhaled by adults for long periods of time, it effects the bone health	Donor breathe dust/fume, avoid release to the environment.
59.	Magnusson II GR	Yes	Skin irritation, causes severe skin burns and eye damage.	Wear protective gloves and eye equipment’s, wash hands and other exposed areas with mild soap and water before eating.

60.	Magnusson I GR	Yes	Eye irritation, causes skin burns.	Wear respiratory protection, wash hands thoroughly after handling it
61.	Magnesium sulphate	Yes	Inhalation symptoms: cough Eye Symptoms: Redness Ingestion Symptoms: Abdominal pain, Diarrhoea, Vomiting.	Magnesium sulphate is a naturally occurring mineral used to control low blood levels of magnesium. Magnesium sulphate injection is also used for paediatric acute nephritis and to prevent seizures in severe preeclampsia, eclampsia or toxaemia of pregnancy.
62.	Magnesium Chloride	Yes	Respiratory depression, low core body temperature, sweating, flushing. Inhalation risk: A nuisance causing concentration of airborne particles can be reached quickly when dispersed, especially if powdered.	This medication is a mineral supplement used to prevent and treat low amounts of magnesium in the blood. Some brands are also used to treat symptoms of too much stomach acid such as stomach upset, heartburn and acid indigestion.
63.	Mercuric Chloride	Yes	Anxiety, depression, memory problems etc. The most common cause of mercury poisoning is from consuming too much methyl mercury or organic mercury, which is linked to eating seafood.	Treatment for Bichloride poisoning, designed primarily to accelerate the excretion of mercury from the body.
64.	Mercuric (II) Oxide red	Yes	It is a highly toxic substance which can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion. The substance is irritating to the eyes, the skin and the respiratory tract and may have effects on the kidneys, resulting in kidney impairment.	Therapeutic uses: In the form of 1% ointment used for inflammation of eyes, peritus ani and epidermophytosis; now largely replaced by other and safer agents.
65.	Mercuric (II) Oxide yellow	Yes	Inhalation symptoms: cough, sore throat. Skin symptoms: Redness Eye symptoms: Redness Ingestion symptoms: Abdominal pain, Nausea, vomiting, diarrhoea.	Yellow mercuric oxide is a treatment of choice for phthisis's Applebaum. It is treated with a regimen of 1% yellow oxide of mercury ointment four times daily for 14 days. No side effects, it is both a safe and effective treatment for phthisis's Applebaum.

66.	Mercuric Sulphate	Yes	a) Not combustible. Gives off irritating toxic fumes in a fire. b) Inhalation: Burning sensation, shortness of breath. Laboured breathing may be absorbed redness. Pain burning sensation. Blisters. c)Eye redness and pain	a) Use local exhaust or breathing protection. Protective gloves or protective clothing. b) Wear face shield or eye protection.
67.	Mercuric Iodide	Yes	a) Ingestion: May be foetal if swallowed poison by ingestion. May causes kidney damage. Causes severe digestive tract irritation with abdominal pain. b) Nausea or vomiting and diarrhoea	a) Use local exhaust or breathing protection protective gloves or protective clothing
68.	Magnesium Bromide	Yes	a) Large doses of bromide cause nausea and vomiting abdominal pain, coma, and paralysis. b) Doses of bromide giving plasmalevelsof12nmole. Plasmalevelgraterthan40n mole.	a) Use a breathing protection wear face shield. b) Emergency medical refer and contain doses.
69.	Nickel Chloride	Yes	a) Reproduction of the rate and possible antagonistic role of selenium in to the cell. b) Induced oxidative stress and tumour promotion response in male waster rates. Also affect kidney, lung	a) Leaching and aging decrease nickel toxicity to soil, microbial processes in soil freshly with nickel chloride. b) Selenium treatment for emergency refer.
70.	Nickel Sulphate	Yes	a) Not combustible. Gives off irritating or toxic fumes in fire. b) Inhalation: Coughs or throat, skin and eye redness. c) Ingestion: Abdominal pain. Dizziness nausea and vomiting.	a) Use closed system or ventilation. b) Protective gloves. protective clothing. c) Wear face shield or safety goggles.
71.	Nitric acid	Yes	It may cause immediate irritation to the respiratory tract, pain, and dystonia.	Immediately flush away the contaminated skin with water
72.	Nickel carbonate	Yes	Cough, redness, pain	Use closed system or ventilation, protective gloves, protective clothing.
73.	Nickel oxide	Yes	Most exposures are via chronic occupational inhalation. Acute severe toxicity is rare.	Obtained especial instruction before use. In case of accident seek medical advice immediately.

74.	Nickel nitrate	Yes	Irritating to the eyes, skin and upon inhalation to the dust.	If inhaled remove to fresh air. If not breathing give artificial respiration.
75.	Nessler's reagent	Yes	If swallowed or in contact with skin.	Use protective gloves, face shield.
76.	Orthophosphoric acid	Yes	a) It causes pain, blepharospasm, lacrimation, or photophobia. b) It is mainly used to for salts to fertilize	a) It is also used in dental cements in the preparation of albumin derivatives and in the sugar and textile industries b) The most important oxygen acid of phosphorus, used to make phosphate salts.
77.	Potassium Permanganate	Yes	a) It may cause systemic toxic effects such as adult respiratory distress syndrome, hepatic renal failure. b) It may damage to the upper gastrointestinal tract.	a) It can help to treat both bacterial and fungal skin Infections such as athlete's foot and impetigo. b) Wet dressing for wounds on your skin's surface that are blistered or oozing pus.
78.	Potassium Dichromate	Yes	a) Its ingestion occurs accidentally, or knowingly with suicidal intention. b) It is heated strongly at decomposes with evolution of oxygen.	a) This is affected by developing a black and white film. b) It is prepared by adding to the neutral yellow chromate of potassium in solution, a moderate quantity
79.	Potassium chromate	Yes	a) They can cause kidney damage and blood cell damage. b) This may produce inflammation of the digestive tract, nausea, Vomiting and abdominal pain.	a) When treated with lead (II) nitrate, it gives an orange-yellow precipitate, lead (II) chromate. b) These salts are corrosive and produce cellular damage to tissue.
80.	Potassium bromide	Yes	KBr is reported to cause depression, weakness., fatigue Leathery, coma and other symptoms related to CNS suppression.	Wash hand and other exposed areas with mild soap and water before leaving the work. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing dust. Use only outdoors or in well ventilated area.
81.	Potassium sulphate	Yes	Slightly harmful in contact. With skin. slightly irritant to skin and respiratory organ.	Use gloves, synthetic apron and avoid breathing dust. Wash hands and other exposed area with water.
82.	Potassium iodide	Yes	May cause allergic reactions such as skin rushes, swelling of various parts of face, lips, tongue, throat, hands or feet, trouble in breathing, wheezing or shortness of breath.	Avoid skin and eye contact with it
83.	Potassium chloride	Yes	Skin and eye irritation. The typical amounts of Kill found in the diet appear to be generally safe; in larger quantities, it is toxic. In such quantities, it has	Avoid skin and eye contact. Do not eat. wash hand with soap and water after work.

			severe consequences on the cardiac muscles, potentially causing cardiac arrest and rapid death.	
84.	Potassium hydroxide	Yes	It is strongly alkaline, very corrosive to the eyes, skin and respiratory tract. Repeated or prolonged contact with skin may cause dermatitis, destroy soft tissues, may cause deep penetrating type of burn.	Wear appropriate personal protective clothing and gloves to prevent skin contact. Wear appropriate eye protection in combination with
85.	Dipotassium oxalate	Yes	Causes eye irritation, harmful if absorbed through the skin, ingestion, inhalation, respiratory problem, fatigue, burning sensation in the throat.	Wash thoroughly after handling use with adequate ventilation, remove contaminated clothing and wash before reuse, avoid breathing dust
86.	Potassium thiocyanate	Yes	Skin irritation, serious eye irritation, respiratory or skin Sanitization, germ cell, mutagenicity, carcinogenicity, muscular fatigue, nausea, vomiting.	Provide good ventilation in process area to prevent formation of vapour. Hygiene measures: do not eat, drink or smoke when using this product.
87.	Potassium acetate molybdate	Yes	Causes skin irritation, serious eye damage, respiratory tract irritation.	Obtain special instructions before use Do not handle until all safety precautions have been read and understood.
88.	Potassium ferricyanide	Yes	Harmful if swallowed irritation to skin, eyes, and respiratory tract. Coughing and shortness of breath.	Avoid release to the environment Dispose in a safe manner in accordance with national regulation.
89.	Potassium ferrocyanide	No		
90.	Potassium Nitrate	Yes	Can irritated the nose throat and lungs causing sneezing and coughing High level can interfere with the ability of the blood of carry oxygen causing headache fatigue dizziness and a blue colour to the skin and lips	In case of skin contact the contaminated skin is washed with large amount of water and soap
91.	Potassium Oxalate	Yes	Discolouration of the finger nails. Irritation of the oral mucous membranes Headache vomiting	Wash the area of contact with large amount of water Wash hand with water or Dettol after working with it.
92.	Potassium Iodate	Yes	May includes stomach or gastrointestinal upset allergic reaction rashes and inflammation of the salivary glands.	As a medication it is used to treat hyperthyroidism in radiation emergencies and to protect the thyroid gland when certain types of radio pharmaceutical are used
93.	Potassium Carbonate	Yes	Burns and sever pain in the mouth and throat swelling which leads to difficulty breathing	Wash skin and contaminated clothing thoroughly after handling Remove person to fresh air and keep at rest in a position comfortable for breathing.

94.	Sodium hydroxide	Yes	a) Eating it can cause severe burns and immediate vomiting. b) It can hurt you if it touches your skin.	a) Wear chemical protective clothing ex- gloves, aprons etc. b) Wear chemical safety goggles
95.	Sodium chloride	Yes	a) If drinking it may cause vomiting, nausea. b) In excess amount of sodium chloride, it can irritate your eyes	a) Always wear a hand glove b) Working area should be sufficient ventilation.
96.	Sodium carbonate	Yes	a) It may cause breathe problems. b) If improperly handled, it can pose several hazards of your skin	a) Check for and remove contact lenses. b) Flush skin with plenty of water.
97.	Sodium hydrogen carbonate	Yes	a) It also causes mild irritation such as redness and slight pain. b) Gastronomical irritation can occur if large amount has been ingested.	a) Wear protective gloves. b) Wash your hand properly after touching it.
98.	Sodium nitrate	Yes	a) If inhaled, it causes respiratory tract irritation. b) It also causes cyanosis, convulsions and death.	a) Avoid ingestion and inhalation. b) Stored in a tightly closed container
99.	Sodium nitrite	Yes	It is weakly toxic. Its human LD_{10} is 71 mg/kg i.e., 65 kg person would likely to consume at least 4.6g to result in a 50% chance of death.	It is recommended that the patients should be treated using methylene blue at a dozen of 1-2 mg/kg bodyweight intravenously over 5 minutes.
100.	Sodium sulphate	Yes	Generally non-toxic, but it should be handled with care. The dust can cause temporary asthma or eye irritation.	Can be prevented by prevented by using eye protection and a paper mask.
101.	Sodium sulphite	Yes	If dust or mist is inhaled, it causes sore throat, cough, shortness of breath, lung enema.	Prevent inhalation by wearing mask and wash with water immediately if come in contact with eye or skin.
102.	Sodium azide		If it is ingested, it mixes with stomach acid and forms the toxic gas, hydrazoic acid.	Most important thing for the victim is to seek medical treatment as soon as possible.
103.	Sodium phosphate diabase (disodium hydrogen phosphate)	Yes	Inhalation can irritate the nose thread causing cough and wheezing High and repeated exposure can cause skin rash.	Prevent inhalation wearing mask. Wash the skin with plenty of water when exposed to the skin.
104.	Sodium thiosulphate	Yes	a) High blood pressure (hyper tension or Kidney disease.	In case of overdose get medical help or contact a poison control carver immediately.

			b) Toxaemia of pregnancy.	
105.	Sodium silicate powder	Yes	Ingesting sodium silicate is moderately toxic and may cause pain and burns of oesophagus and gastrointestinal tract.	Avoid any skin contact run off control or dilution water may be corrosive
106.	Sodium stannate	Yes	Specific target organ toxicity. May cause respiratory irritation.	Remove contaminated clothing and shoes, seek medical advice.
107.	Sodium nitroprusside	Yes	a) Include low blood pressure and cyanide toxicity b) High doses are not recommended for more than ten minutes.	This compound has also been used as a treatment for aortic valve stenosis, oesophagus varices.
108.	Sodium peroxide	Yes	Contact can severely irritate and burns the skin and eyes with possible eye damage.	Wear impact resistant eye protection with side shields. Immediately consult to the doctor
109.	Sodium Cobalt Nitrate	Yes	a) Decompose on heating. This produces toxic gases including nitrogen oxides reacts with combustible substance this generates hazards. b) Inhalation: Sore throat cough, short ness of breath, skin redness and eyes redness and pain	a) No contact with combustible substance or reducing agents. b) Use local exhaust or breathing protection. c)Protective gloves, protective clothing d) Wear safety mask
110.	Sodium Hypochlorite	Yes	a) No combustible. Gives of irritating or toxic fumes in a fire. b) Inhalation: Burning sensation, cough, laboured breathing, shortness of breathing. c) Skin: Redness, Burns and eyes redness pain and severe.	a) Use ventilation, local exhaust breathing protection. b) Protective gloves, protective clothing c) Wear safety mask or face shield.
111.	Sodium Sulphite	Yes	a) No combustible. Gives of irritating or toxic fumes in a fire. b) Inhalation: Burning sensation, cough, laboured breathing, shortness of breathing. c)Skin: redness, Burns and eyes redness pain and severe.	a) No open flames, no smoking, no contact with acid or oxidizing agent. b) Use close system of ventilation. c)Protective gloves, protective clothing d) Wear safety mask or face shield.
112.	Sodium Sulphite	Yes	a) No combustible. Gives of irritating or toxic fumes in a fire. b) Inhalation: Burning sensation, cough, laboured breathing, shortness of breathing.	a) No open flames. b) use local exhaust or breathing protection. c)Wear safety goggles or eye protection in combination with breathing protection if powdered

			c)Skin: redness, Burns and eyes redness pain and severe.	
113.	Sodium oxalate	Yes	It can cause burning pain in the mouth, throat and stomach, bloody vomiting, headache, muscle cramps, cramps and convulsions, drop in blood pressure, heart failure, shock, coma, and possible death.	INHALATION: move to fresh air; if exposure to dust is severe, get medical attention. INGESTION: give dilute calcium lactate, lime water, or milk; administer gastric lavage; consult physician; watch for enema of the glottis and delayed constriction of oesophagus. EYES or SKIN: flush with water.
114.	Sodium Acetate	Yes	Hazardous in case of skin contact (irritant), of ingestion, of inhalation. … May cause irritation to the gastrointestinal tract. Skin Contact: Sodium acetate anhydrous causes irritation to skin. Eye Contact: Causes irritation.	a) Wear protective gloves, protective clothing, or face protection. b) Do not eat, drink or smoke when using this product.
115.	Stannous Chloride	Yes	Burns, but may be difficult to ignite. Toxic by ingestion. Irritates skin and eyes	EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes. SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. INGESTION: DO NOT INDUCE VOMITING. Corrosive chemicals will destroy the membranes of the mouth, throat, and oesophagus and, in addition, have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control centre.
116.	Strontium Nitrate	Yes	Headache, flushing of skin, vomiting, dizziness, collapse, marked fall of blood pressure, cyanosis, convulsions, coma, &rasp paralysis.	Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for shock and treat if necessary … Anticipate seizures and treat as necessary … For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport … Do not use

				emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool.
117.	Silver Nitrate	Yes	Skin Pain. Redness. Skin burns. Blisters. Further see Inhalation. EYE: Redness. Pain. Severe deep burns. Loss of vision. INGESTION: Abdominal pain. Burning sensation. Shock or collapse. Further see Inhalation.	Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Remove and isolate contaminated clothing and shoes. Contaminated clothing may be a fire risk when dry. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Keep victim calm and warm.
118.	Sulfuric acid	Yes	a) Can cause severe skin burns, irritate the nose and throat and cause difficulties in breathing if inhaled. b) Can burn the eyes and possibly cause blindness, and can burn holes in the stomach if swallowed	a) It is flushed with a mild, soapy solution if the burns are not severe. b) Dry powders such as dry lime are effective in this purpose.
119.	Uranyl Zinc Acetate	Yes	a) Combustible under specific condition. Risk of fire and explosion on contact with magnesium. b) Inhalation: Cough, sore throat. c)skin redness and eyes redness and pain	a) Use breathing protection. b) Use protective gloves. c)Use tightly shield goggles.
120.	Zinc oxide	No		
121.	Zinc carbonate		a) Contact can cause skin and eye irritation. b) Breathing zinc carbonate can irritate the nose and throat causing coughing and wheezing	a) Wear protective work clothing. b) Wash thoroughly immediately after exposure to zinc carbonate
122.	Zinc acetate	Yes	Nausea, vomiting, stomach? abdominal pain, mental changes, decrease in urine production	Wear eye, skin protective cloth, after handing wash hands.
123.	Zinc phosphate	Yes	a) Accidental consumption may cause headache, dizziness, vomiting, difficulty in breathing, liver, kidney failure b) Convulsions and coma may also occur if a person is exposed to enough phosphine.	a) Wear protective work clothing. b) Wash thoroughly immediately after exposure to zinc phosphate and also consult a doctor if needed.
124.	Zinc power	No		
125.	Zinc nitrate	Yes	a) May intensify fire. b) Contact can causes skin irritation, causes serious eye irritation.	a) Keep away from heat wear protective gloves or protective clothing. b) Wash skin

ORGANIC REAGENTS

SL NO.	Name of the chemicals	Toxic or Not	Toxicity	Remedy
1.	Acetamide	Yes	a) It can irritate the nose b) It damages the liver c) It can also cause corneal damage	a) Remove the person from exposure. b) Transfer promptly to a medical facility c) Wear mask and proper dress
2.	Acetanilide	Yes	a) It interferes the function of haemoglobin b) Skin contacts and inhalation cause irritation c) It causes cyanosis	a) By recommendation of a doctor, cyanosis can be cured by changing lifestyle such as smoking or drinking caffeine
3.	Adipic Acid	Yes	a) It can cause chronic health effects. b) It causes cancer c) Contact with it, causes irritation of skin and eye.	a) Wear protective work clothing. b) Wash thoroughly immediately after exposure to adipic acid.
4.	4-Aminophenol	Yes	a) Harmful if swallowed or inhaled. b) Suspected of causing genetic defects if inhaled.	a) Don't eat, drink or smoke when using this chemical b) Don't handle until all safety precautions have been read.
5.	Alizarin Red	Yes	a) Eye contact of this material can cause eye irritation and damage in some persons. b) Contact with it causes skin inflammation. c) It causes respiratory irritation and further it causes lungs disease.	a) Avoid all personal contact including inhalation. b) Wear protective clothing when risk of exposure occurs. c) It causes respiratory irritation and further it causes lungs disease.
6.	6-Anthrone	Yes	a) It causes eye irritation. b) Contact with it causes skin inflammation. c) It also causes respiratory irritation as well as lungs disease.	a) Wear masks and goggles while treating with this substance. b) Examine the skin prior to the use of the material and ensure that any external damage is suitably protective.
7.	Anthracene	Yes	a) In human's anthracene may cause acute dermatitis with symptoms of burning, itching and enema.	a) Avoid skin contact with anthracene. Wear protective gloves and clothing. b) Source of ignition such as smoking and open flames are prohibited where anthracene is used.

			b) Hematologic toxicity was observed in patients receiving intraperitoneal injection of anthracene containing chemotherapeutic agents and in rats exposed to anthracene by oral gavage and by inhalation.	
8.	Acetaldehyde	Yes	a) The substance is mildly irritating to the eyes, skin and respiratory tract. b) It may cause effects on the central nervous system and prolonged contact with skin may cause dermatitis.	a) Always wear proper protective equipment while handling acetaldehyde like goggles, gloves etc. b) Wash your skin and eyes with clear water if it is exposed to the skin and eyes
9.	Aniline	Yes	a) Direct contact with aniline can cause skin and eye irritation. b) If ingested, inhaled or by skin contact, it can damage haemoglobin by preventing it from carrying oxygen, known as methaemoglobin.	a) Always use ventilation, local exhaust or breathing protective masks during work. b) Consider hyperbaric oxygen therapy in patients who are refractory to methylene blue therapy.
10.	Anisaldehyde Pure	Yes	a) May causes skin irritation, eye irritation. Prolonged or repeated contact may dry the skin and cause irritation of it. b) If swallowed it may cause irritation of the digestive tract and causes harmful effects.	a) In case of contact with eyes or skin, immediately flush eyes with plenty of water for at least 15 minutes and same with skin. b) Remove contaminated clothing and shoes. Get medical aid if irritation develops and persist.
11.	Acetyl Bromide	Yes	a) Contact can severely irritate and burn the eyes and skin with possible permanent damage. b) Breathing acetyl bromide can irritate the nose and throat and can irritate the lungs	a) Wear indirect-vent, impact and splash resistant goggles when working with liquids and corrosive, highly irritating or toxic substances. b) Acetyl bromide must be stored to avoid contact with water, steam and alcohols since violent reaction occurs releasing corrosive carbonyl bromide, hydrogen bromide and bromine gas.

			causing coughing or shortness of breath.	
12.	Acetyl Chloride	Yes	a) Inhaling acetyl chloride can irritate the nose, throat and lungs causing coughing or shortness of breath. b) Higher exposure may cause a build-up of fluid in the lungs (pulmonary enema), a medical emergency with severe shortness of breath.	a) Avoid skin contact by wearing protective equipment made from materials that cannot be permeated or degraded by this substance. b) In case breathing has stopped CPR is necessary along with removal of contaminated cloths and gears and seek medical aid immediately
13.	Tetraplex	Yes	a) It causes serious eye irritation and skin irritation if exposed to it. b) It can also cause respiratory irritation and if swallowed can cause damage to organs through prolonged and repeated exposure.	a) Use tetraplex only outdoor or in a well-ventilated area and avoid release of it to the environment. b) Always wear protective masks, gloves and goggles while working with this chemical.
14.	Acetyl Acetone	Yes	a) Causes eye irritation. b) Toxic if absorbed through skin. Causes skin irritation.	a) Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. b) Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician
15.	Acetonitrile	Yes	a) Acetonitrile liquid and vapor can irritate the eyes, nose, throat and lungs. b) Inhalation of acetonitrile vapours can cause adverse health effects.	a) Flush the eyes with large amounts of water and continue for several minutes, occasionally lifting the upper and lower lids. b) Leave the area of the exposure immediately and move to a source of fresh air. Artificial respiration may be necessary if breathing has stopped.
16.	Acetophenone	Yes	a) Acute exposure to acetophenone vapor may produce skin irritation and transient corneal injury. b) Congestion of the lungs, kidneys, and liver were reported in rats acutely exposed to high levels of acetophenone via inhalation.	a) Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. b) Get medical attention.

17.	Acetone	Yes	a) Causes moderate to severe irritation. Symptoms include sore, red eyes, and tearing. The vapour also irritates the eyes. b) May cause mild irritation. Can be absorbed through the skin, but harmful effects are not expected	Contaminated eye with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid open. b) Take off contaminated clothing, shoes and leather goods (e.g., watchbands, belts)
18.	Isoamyl Acetate	Yes	a) Contact can irritate the skin and eye. b) Breathing Isoamyl Acetate can irritate the nose and throat.	a) Wear indirect-vent, impact and splash resistant goggles when working with liquids. b) Use a MSHA/NIOSH approved full face piece respirator with an organic vapour cartridge.
19.	Benzil	Yes	a) Hazardous in case of skin contact (irritant), of eye contact (irritant). b) It may cause lung irritation.	a) In case of contact with skin and eye, immediately flush eye with plenty of water for at least 15 minutes. Cover the irritate skin with an emollient. b) If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
20.	Benzoin	Yes	a) Inhalation: Cough. Sore throat. b) Skin: Redness. c)Eyes: Redness.	a) Use local exhaust or breathing protection. Fresh air, rest. b) Use protective gloves
21.	Benzophenone	Yes	The substance is mildly irritating to the skin.	Use Protective gloves. Rinse and then wash skin with water and soap.
22.	Biphenyl	Yes	a) Inhalation: Cough. Nausea. Vomiting. b) Eyes: Redness. Pain	a) Avoid inhalation of dust and mist. Use local exhaust or breathing protection. Fresh air, rest. Refer for medical attention. b) Wear safety goggles or eye protection in combination with breathing protection if powder.
23.	Benzidine	Yes	a) Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	a) Use closed system and ventilation.
24.	Bone Ash	No		
25.	Boric acid	Yes	a) Inhalation: Cough. Sore throat. b) Ingestion: Nausea. Vomiting. Diarrhoea. Abdominal pain. Skin rash. Headache. Drowsiness. Convulsions.	a) Use local exhaust or breathing protection. Fresh air, rest. b) Do not eat, drink, or smoke during work. Rinse mouth. Do not induce vomiting. Refer immediately for medical attention.

26.	4-bromo aniline	Yes	a) It gives off irritating or toxic fumes in a fire. b) If inhaled, it results in blue lips, fingernails and skin, headache, nausea	a) Wearing safety spectacles or eye protection in combination with breathing protection. b) Using local exhaust, protective gloves help in containing the effects of 4-bromo aniline.
27.	Benzaldehyde	Yes	a) If inhaled, it causes cough, sore throat; redness in skin; as it is a flammable liquid and vapour. (b)harmful if swallowed or in contact with skin.	Removing contaminated clothes, rinsing skin with plenty of water or shower helps to some extent.
28.	Benzoyl chloride	Yes	(a)It causes burning sensation, cough, shortness of breath and sore throat. (b)Can also cause abdominal pain, shock or collapse.	(a)Removing contaminated clothes, rinsing skin with plenty of water. (b)Wearing protective gloves when administrating first aid are some of the remedial methods.
29.	Benzene	Yes	(a)If inhaled, it causes dizziness, drowsiness, headache, nausea, shortness of breath, convulsions. (b)If ingested, it causes abdominal pain, sore throat, vomiting.	(a)Removing contaminated clothes, rinsing skin with plenty of water. (b)In case of fire and explosion, foam, water spray, carbon dioxide, powder should be applied.
30.	Bromine water	Yes	(a)If inhaled, it causes cough, sore throat, shortness of breath, wheezing. (b) If ingested, it burns in mouth and throat, burning sensation in the throat and chest, abdominal pain, shock or collapse.	Removing contaminated skin, rinsing with water helps in getting some relief.
31.	Benzene Sulfonyl Chloride	Yes	(a)Irritate and burn the skin and eyes with possible eye damage. (b) Breathing can irritate the nose and throat; can irritate the lungs causing coughing and shortness of breath.	(a)Removing contaminated clothes, rinsing skin with plenty of water. (b)Wearing protective gloves and clothes can provide some sort of help.
32.	Bromo benzene	Yes		phytocompounds are used to prevent liver toxicity.

			(a)Little is known about chronic effects. (b) For liver toxicity, the 3,4-epoxide are proposed intermediates.	
33.	Benzyl chloride	Yes	(a) In contact with mucous membranes, hydrolysis produces hydrochloric acid. (b) It is also very irritating to the skin.	(a)Avoid contact with skin, eyes, and clothing. (b)Wash hands before breaks and immediately after handling the product.
34.	Benzyl bromide	Yes	(a) Benzyl bromide is a strong lachrymator and is also intensely irritating to skin and mucous membranes.	(a)Wear protective work clothing. (b)Wash thoroughly immediately after exposure to Benzyl Bromide and at the end of the work shift.
35.	1-Bromo Pentane	Yes	(a) Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. (b) Inhalation: Causes respiratory tract irritation. Vapors may cause dizziness or suffocation.	(a)Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. (b)Keep away from heat, sparks and flame. (c)Avoid ingestion and inhalation.
36.	Benzoic acid	Yes	Immediately or shortly after exposure to benzoic acid, the following health effects can occur: Eye damage. Irritation of the skin, resulting in a rash, redness, and/or a burning feeling. Irritation to the nose, throat and lungs if inhaled, which may cause coughing, wheezing and/or shortness of breath.	(a)Wash hands thoroughly after handling. (b)Avoid contact with eyes, skin, and clothing. (c)Avoid breathing dust. (d)Minimize dust generation and accumulation.
37.	1-Chloro-4-nitro benzene	Yes	(a) Toxicity to reproduction. (b) Inhalation causes acute toxicity.	Avoid the uses of the compound

38.	4-chlorobenzoicacid	Yes	(a)Acute oral toxicity. (b) Skin corrosion/ irritation. (c)Serious eye damage, eye irritation. (d)Specific target organ toxicity (single exposure) target organ-respiratory system.	(a)Wash face, hands and any exposure skins thoroughly after handling. (b) Wear protective gloves/protective clothing/eye protection/face protection. (C)Don't eat, drink or smoke when using this product. (d)Avoid breathing dust, fumes, gas, mist, vapour, spray
39.	4-chloro benzaldehyde	Yes	(a)May cause skin irritation. (b)Harmful if swallowed. (c)Causes skin irritation. May cause respiratory irritation. (d)May form combustible dust concentration in air.	(a)Wash face, hands and any exposure skins thoroughly after handling. (b)Wear protective gloves/protective clothing/eye protection/face protection. (c)Don't eat, drink or smoke when using this product. (d)Avoid breathing dust, fumes, gas, mist, vapour, spray
40.	Choro acetic acid	Yes	(a)Corrosive chemical and contact can surely irritate and burn the skin and eyes with possible eye damage. (b)Breathing it can irritate the nose throat and lungs causing coughing, wheezing or shortness of breath.	(a)Wash face, hands and any exposure skins thoroughly after handling. (b)Wear protective gloves/protective clothing/eye protection/face protection. (c)Don't eat, drink or smoke when using this product. (d) Avoid breathing dust, fumes, gas, mist, vapour, spray
41.	2-chloro benzoic acid	Yes	(a)Skin corrosion/irritation. (b)Serious eye damage/ eye irritation.	(a)Wash face, hands and any exposure skins thoroughly after handling. (b)Wear protective gloves/protective clothing/eye protection/face protection. (C)Don't eat, drink or smoke when using this product. (d)Avoid breathing dust, fumes, gas, mist, vapour, spray
42.	Carbon tetrachloride	Yes	(a) Inhalation and oral exposure to carbon tetrachloride include headache, weakness, lethargy, nausea and vomiting. (b)Acute exposures to higher levels and chronic (long term) inhalation or oral exposure to carbon tetrachloride produces liver and kidney damage in humans.	(a)Wash face, hands and any exposure skins thoroughly after handling. (b)Wear protective gloves/protective clothing/eye protection/face protection. (C)Don't eat, drink or smoke when using this product. (d)Avoid breathing dust, fumes, gas, mist, vapour, spray

43.	Chloroform	Yes	(a)Exposure to high concentration may cause convulsions, coma and death due to respiratory failure or cardiac arrhythmias. (b)Chronic inhalation nor ingestion of chloroform may cause hepatic damage. (c)Causes burning sensation of the mouth and throat, ocular and dermal exposure. (d)Nausea, vomiting followed by dizziness.	(a)While handling chloroform make sure to keep it away from your nose
44.	Choro benzene	Yes	a) If a person ingest chlorobenzene, he will become unconscious, cyanotic and has muscle spasms. b) Acute inhalation to animals of it produce narcosis, restlessness and muscle spasms.	b) Personal care should be taken such that it does not get in eyes, do not touch chlorobenzene with bare hands. b) If chlorobenzene gets into eyes then rinse eyes with water for at least 15 minutes. In case of touch to the skin, it will be rinsed with water and soap.
45.	Carbon disulphide	Yes	a) In case of carbon disulphide poisoning, the person becomes comatose and death may occur usually due to respiratory depression and convulsions. b) In less severe cases local irritation, nausea, vomiting followed by headache, euphoria, hallucinations etc occur.	a) To use personal protective devices such as gloves, apron, vapour respirator etc. while handling it. b) In case of inhalation the person is supported respiratory and cardiovascular function and irrigation of contaminated eyes or skin
46.	Cycle hexane	Yes	a) Cyclohexane is relatively non-toxic and does not have adverse effect like benzene. b) In case of inhalation it causes depression of the central nervous system and has narcotic effects.	a) To use vapour respirator while using cyclohexane. b) In case of irritation of skin after contact, the skin must be rinsed with cold water and soap.

47.	2,4-dinitrophenyl hydrazine	Yes	a) It is flammable and possibly has carcinogenic effects. b) If absorbed through skin it causes skin irritation c) In case of exposure to eyes may causes eye irritation.	a) Basic remedies were to remove contaminated cloths and cut off the contaminated hair and nails. b) Since there is no antidote, all patients recovered by physical cooling with ice bags and supportive treatments includes ECG monitoring, oxygen therapy and acid-base monitoring.
48.	Diphenyl amine	Yes	a) Acute oral and dermal toxicity were low but causes severe irritation to the eyes in case of contact. b) Diphenyl amine targets the red blood cell system and can cause abnormal erythropoiesis, hemosiderosis etc.	a) Avoid contamination to eyes and skin. In case of contamination, it will be rinsed through water for several minutes. b) To use personal protective gloves, clothing layer protection etc. while handling it.
49.	Dimethyl glyoxime	Yes	a) Hazardous in case of oral ingestion and inhalation and causes difficulty in breathing. b) In case of contact with skin and eyes causes irritation of it.	a) In case of eye contact immediately flush eyes with plenty of water for at least 15 minutes. b) If inhaled, remove to fresh air and if not breathing artificial oxygen supply is to be applied.
50.	Toluene	Yes	a) Toluene causes irritation to the skin, eyes and respiratory tract. b) In case of ingestion or inhalation it causes headache, dizziness, hallucination, respiratory depression, nausea, vomiting etc.	a) Chemical protective clothing should be worn when repeated or prolonged contact with toluene. b) Positive pressure, self-contained breathing apparatus (SCBA) is recommended in case of experiments with potentially unsafe levels of toluene vapour.
51.	Dimethyl sulfoxide	No		
52.	D-glucose (dextrose)		Ongoing high blood sugar can damage our organs and tissues. It can also decrease the number of white cells in our body. It can also cause excessive thirst, frequent urination, headache, dry mouth.	Changing diet, getting more exercise, getting insulin injections, taking medication.

53.	Diethyl ether	Yes	Cough. Sore throat. Drowsiness. Headache. Laboured breathing. Dry skin. redness of eyes, pain.	Use ventilation, local exhaust or breathing protection. protective gloves, wear safety goggles. Do not eat, drink, smoke during work.
54.	1,3-diaminopropane	Yes	Harmful if swallowed, fatal in contact with skin causes severe skin burns and eye damage.	Wear protective gloves, protective clothing, eye protection, face protection. Do not induce vomiting
55.	1,4-dioxane	Yes	Acute inhalation exposure to high levels of 1,4- dioxane can caused vertigo, drowsiness, headache, anorexia and irritation of the eyes, nose, throat, and lungs in humans. It may also irritate the skin.	Use ventilation, local exhaust, breathing protection. wear protective gloves, protective clothes, eye protection, face protection.
56.	Dichloromethane	Yes	It can cause cough, pulmonary irritation, pulmonary enema, mucous membrane irritation, skin irritation and corrosive burns.	Use ventilation, local exhaust, breathing protection. Wear protective gloves, protective clothes, eye protection, face protection.
57.	Di-N-Butylamine	Yes	Gives off irritating or toxic fumes causes cough sore throat.	Use eye protection, skin protection.
58.	Ethanol (anhydrous)	Yes	Cough, headache, fatigue, dry skin, eye redness, pain.	Use ventilation, local exhaust, breathing protection. Wear protective gloves, protective clothes, eye protection, face protection.
59.	2,2-diphenyl-1-picrylhydrazyl (DPPH)	Yes	It can cause cough, pulmonary irritation, pulmonary enema, mucous membrane irritation, skin irritation and corrosive burns.	Use ventilation, local exhaust, breathing protection. wear protective gloves, protective clothes, eye protection, face protection.
60.	1,3-Dioxolane	Yes	Cough, headache, fatigue, dry skin, eye redness, pain.	Use ventilation, local exhaust, breathing protection. Wear protective gloves, protective clothes, eye protection, face protection.
61.	Ethyl acetate	Yes	It causes the irritation of the eyes, nose and throat, followed by headache, nausea, vomiting, sleeping and unconsciousness.	Wear safety glasses, gloves and a vapor respirator.
62.	Ethyl methyl ketone	Yes	It burns leading to stricture forcing inhalational pneumonitis acidosis, living failure and renal failure.	Clean clothing shoes and leather goals. Its irritation or pain see a doctor. Have a victim rinse mouth with water.

63.	Ethyl acetoacetate	Yes	It causes irritation when it comes into contact with the eyes or skin.	Keep away from heat / sparks/open flames, wash skin thoroughly after handing. Wear protective gloves/protective clothing/eye protection.
64.	Ethylene glycol monomethyl ether	Yes	Cough, drowsiness, headache, shortness of breath, sore throat weakness. unconsciousness, skin, eyes pain, abdominal pain, nausea. vomiting.	Use ventilation, local exhaust or breathing protection, wear protective gloves, protective clothing, wear face shield or eye protection in combination with breathing protection.
65.	Creosote oil	Yes	Cough, shortness of breath, redness, skin burning sensation, eyes redness, pain, vomiting, weakness, shock of collapse.	Use local exhaust or breathing protection, wear protective gloves, wear safety goggles or eye protection.
66.	Fehling solution A	Yes	Inhibiting gluconeogenesis in the liver, kidneys, lungs, spleen, causes eyes, skin problem.	Use with adequate ventilation and do not breath dust or vapor. Avoid contact with skins, eyes, or clothing. wash hands thoroughly after handing.
67.	Fehling solution B	Yes	Inhibiting gluconeogenesis in the liver, kidneys, lungs, spleen, causes eyes, skin problem.	Use with adequate ventilation and do not breath dust or vapor. Avoid contact with skin, eyes, or clothing. wash hands thoroughly after handing.
68.	Formic acid	Yes	Cough, headache, fatigue, dry skin, eye redness, pain.	Use local exhaust or breathing protection, wear protective gloves, wear safety goggles or eye protection.
69.	Formaldehyde solution	Yes	It causes irritation when it comes into contact with the eyes or skin.	Keep away from heat / sparks/open flames, wash skin thoroughly after handing. Wear protective gloves/protective clothing/eye protection.
70.	Glycine	Yes	Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Finely dispersed particles form explosive mixtures in air.	Use local exhaust or breathing protection, wear protective gloves, wear safety goggles or eye protection.
71.	Glycerol	Yes	Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Dry skin, diarrhoea.	Use ventilation. Protective gloves. Wear safety goggles. Do not eat, drink, or smoke during work.
72.	Hydroquinone	Yes	It causes dizziness, nausea, headaches and even unconsciousness. Skin redness, eye redness.	Use local exhaust or breathing protection, wear protective gloves, wear safety goggles or eye protection.

73.	Hydroxyl ammonium chloride	Yes	Skin corrosion, respiratory or Skin sensitization, very toxic to aquatic organisms, muscle pain.	After touching it, wash with plenty of soap and water, wear protective gloves.
74.	2-hydroxy-1-(2-hydroxy-4-sulpho-1-napthylazo)-3-naphthoic acid	Yes	Causes skin irritation, causes serious eye irritation.	Wash skin thoroughly after handling, take off contaminated clothes and wash it before reuse.
75.	Hydrazine hydrate	Yes	Causes skin irritation/ contact dermatitis, causes respiratory problem, temporary blindness.	Handle with gloves, use a full-face supplied air respirator.
76.	Hexane	Yes	It causes dizziness, nausea, headaches and even unconsciousness.	Use personal protective equipment, ensure adequate ventilation, remove all sources of ignition.
77.	Iodine	Yes	Very large amounts of iodide may cause a brassy taste in the mouth, increased salvation, stomach pain, fever.	Remedies of iodine consists of correcting thyroid abnormalities and, if intake is excessive, dietary modification.
78.	Trans B nitro styrene	Yes	Diarrhoea, abdominal pain, vomiting, nausea.	Handle under inert gas, wash thoroughly after handling, wear protective gloves.
79.	Lactic acid	Yes	Inhalation symptoms: Diarrhoea, abdominal pain, vomiting, nausea. Diarrhoea, abdominal pain, vomiting, nausea. Burning sensation, cough, sore throat, shortness of breath. Skin symptoms: Redness, Pain. It is used as a general-purpose food additive in animal drugs, feeds and related products.	Lactic acid is often the result of normal metabolism. Oxygen in the blood is necessary to convert glucose into energy. Lactic acid can help the body absorb energy, and burn calories, and increases endurance levels.
80.	Methyl red	Yes	Ingestion: Harmful if swallowed. May cause gastro intestinal irritation	Skin- gently wash all affected skin areas thoroughly with soap and water, if symptoms such as redness or irritation develop.

			with nausea, vomiting and diarrhoea. Inhalation: may cause respiratory tract irritation.	Ingestion- do not induce vomiting. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and immediately call a hospital or poison control centre.
81.	Methylene blue	Yes	If inhaled or swallowed, it can cause issues for the eye, skin, and digestive tract. Also, it was reported that methyl red dye may harm aquatic life if exist in water at heavy concentrations.	Methyl red reagent is an indicator solution used to indicate the pH of the broth culture in the methyl red test. The methyl red test is used to detect the ability of an organism to produce and maintain acid end products from glucose fermentation. The test is useful for differentiating among members of the Enterobacteriaceae.
82.	M-nitrophenol	Yes	Inhalation or ingestion causes headaches, drowsiness, nausea and blue colour in lips, ears, and finger nails (cyanosis). Eyes: contact with eyes causes irritation. Skin: can be absorbed through intact skin to give same symptoms as for inhalation.	M-Nitrophenol is used in synthesizing some dyestuffs and drugs. And used as a fungicide to control mild/mildew, dry rot on leather. Pre-treated samples were analysed by gas chromatography for the micro determination of M-Nitrophenols. Recoveries ranged from 88 to 96%.
83.	M-nitro benzaldehyde	Yes	Causes skin irritation and eye Diarrhoea, abdominal pain, vomiting, nausea.	It is a colourless liquid with a characteristic almond door. It is used in the synthesis of other organic compounds, ranging from pharmaceuticals to plastic additives and intermediate for the processing of perfume and flavouring compounds and in the preparation of certain aniline dyes.
84.	M-dinitrobenzene	Yes	a) Combustible. Gives off irritation or toxic fumes in a fire. Finally, dispersed particles form explosive mixture in air. b) Inhalation: Blur lips finger nails and skin, headache, weakness, laboured breathing. c)Skin may be absorbed and redness and pain of eye.	a) No open flames. Closed system b) Dust explosion proof electrical equipment and lighting. c) Breathing protection. Protective gloves Protecting clothing. d)Wear face shield or eye protection.
85.	Methyl acetate	Yes	a) Contact can irritate and burn the eyes.	a) Donor eat smoke or drink were handled it. b) Wear a face shield along with a protective glove

			b) Contact can irritate the skin and causing itching. Redness, drying, rash and cracking. c)Exposure can cause dizziness, light, redness, nausea and passing out	
86.	Methanol	Yes	a) Highly flammable, vapour/air mixture are explosive on contact with in completable substance b) Inhalation: cough, dizziness headache, weakness, shortness of breath. Dry skin, redness of eye.	a) No open flames, No sparks and o smoking. Use non sparking hand tools. b) Use ventilation, use local exhaust or breathing protection c) Protective gloves, protective clothing, wear face shield or eye protection.
87.	M-toluidine	Yes	a) Combustible. gives off irritating or toxic in a fire. above 85C explosive vapour/air mixture may be formed. b) Inhalation: Blue lips, fingernails and skin headache, shortness of breath. c)Skin: Redness, eyes: redness, pain.	a) No open flames. Use a closed system and ventilation. b) Use ventilation, breathing protection. c)Wear safety goggle and protective gloves.
88.	1-methyl imidazole	Yes	a) Skin contact: Remove contaminated clothing, Redness. b) Eye contact: Redness, pain, headache.	a) Use safety goggles, protective gloves. b) Use personal protection clothing.
89.	1-nitroso-2-napthol	Yes	a) Harmful if swallowed, irritating to eyes, respiratory system and skin, very toxic to aquatic organisms. b) May produce serious damage to the health of the individual.	a) Use ventilation, use local exhaust tor breathing. b) Protective gloves, protecting clothing
90.	4-nitroaniline(p-nitroaniline)	Yes	Causes skin irritation and eye Diarrhoea, abdominal pain, vomiting, nausea.	a) No open flames, No sparks and o smoking. Use non sparking hand tools. b) Use ventilation, use local exhaust or breathing protection c) Protective gloves, protective clothing, wear face shield or eye protection.
91.	2-napthol	Yes	a) Skin contact: Remove contaminated clothing, Redness.	a) Use safety goggles, protective gloves. b) Use personal protection clothing.

			b) Eye contact: Redness, pain, headache.	
92.	Naphthalene	Yes	a) Contact can irritate and burn the eyes. b) Contact can irritate the skin and causing itching. Redness, drying, rash and cracking. c)Exposure can cause dizziness, light, redness, nausea and passing out	a) Donor eat smoke or drink were handled it. b) Wear a face shield along with a protective glove
93.	1-napthol	Yes	(a) It is a colourless liquid with a fruity door. (b) It can cause nausea, vomiting and diarrhoea.	Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes.
94.	4-nitrophenol(p-Nitrophenol)	Yes	Can cause respiratory irritation and eye irritation in some persons.	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs.
95.	Ninhydrin	Yes	Inhalation, skin irritation, eyes irritation, blue skin dizziness, headache.	Protective gloves, Protective clothing, safety goggles, do not eat drink, or smoke during work.
96.	3-nitroaniline	Yes	(a)It is used as a raw material for dyes. (b)It is a highly toxic irritant.	(a)It is necessary in case of poisoning with this substance. (b) It is used as a diazo component in azo dyes
97.	Nitrobenzene	Yes	(a)It is a yellowish, oily, aromatic nitro compound. (b) Its symptoms include fatigue. Weakness, dyspnoea, headache and dizziness	(a)It is an important to take care of the secondary cycling of nitrobenzene from body stores in patient. (b) Treatments started with oxygen intravenous (IV) fluids, and gastric lavage was done with normal saline.
98.	N-N-dimethyl Aniline	Yes	(a) It appears as a yellow to brown colored oily liquid with a fishlike odor. (b) It effects on t he central nervous systems and circulatory system, with headache, cyanosis, and dizziness in humans.	(a)Effectes on the blood have been reported in exposed workers. (b) Toxic by ingestion inhalation, and skin absorption .

99.	N-hexanol	Yes	(a) It is a colorless liquid with a fruity odor. (b) It can cause nausea, vomiting and diarrhea.	(a)Indication of any Immediate medical attention and special treatment needed.
100.	N-heptane	Yes	(a) It is a flammable liquid and it is a dangerous fir hazard. (b) It can cause headache, lightheadedness, dizziness, lack of coordination and loss of consciousness.	(a)It can irritate the eyes, nose, and throated. (b) Loss of appetite and or nausea may occur.
101.	N-pentane	Yes	(a) It appears as a clear colourless liquid with a petroleum like door. (b) It can ca use human aspiration toxicity hazard. (c) It can cause headache, dizziness, tiredness, nausea and vomiting.	(a)It may be fatal if Swallowed and enter airway. (b)Less dense than water and insoluble in water.
102.	N-butanol	Yes	Brief, repeated overexposure with the skin can result in depression of the central nervous system	Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes.
103.	N-amyl alcohol(n-pentanol)	Yes	Moderately toxic by ingestion vapours may irritate skin, eyes and respiratory tract. If swallowed the substance may cause vomiting and could result in aspiration pneumonitis.	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Remove all ignition sources.
104.	1-napthylamine	Yes	It can cause bladder cancer. Contact may slightly irritate skin, eyes and mucous membrane.	Avoid skin contact. Wear protective gloves and clothing.
105.	O-nitroaniline (2-nitroaniline)	Yes	Inhalation of its vapour and ingestion may cause Blue lips fingernails and skin. Headache, dizziness, nausea, laboured breathing. A late acute haemolytic	Do not breathe dust/fume/mist /vapour/gas/spray. Wash skin thoroughly after healing. Use only outdoors or in a well-ventilated area.

			episode should be anticipated at 6 to 8 days after ingestion.	
106.	N-butyl acetate	Yes	Slightly irritate skin and dry skin. Contact with eye may cause pain irritation and redness. Inhalation cause cough, sore. Throat, dizziness, headache narcosis	Avoid contact with eyes, skin and clothing. Wash hand thoroughly after handling. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid breathing vapor.
107.	Oxalic acid	Yes	Exposure to oxalic acid can cause headache, dizziness, nausea and vomiting convulsions, coma and even death.	Use only with adequate ventilation. Always wear impenetrable gloves when handling any form of oxalic acid. Protective clothing should be worn to prevent contact of the liquid or powder with skin. Goggles and respirator should use when vaporising oxalic acid crystals.
108.	O-toluidine	Yes	Inhalation, skin irritation, eyes irritation, blue skin dizziness, headache.	Protective gloves, Protective clothing, safety goggles, do not eat drink, or smoke during work.
109.	O-nitro toluene	Yes	Skin corrosion, serious eye damage, respiratory or skin sensitization.	Avoid contact with skin and eyes, avoid inhalation of vapor or mist. Respiratory protection. Hand protection.
110.	O-amino phenol	Yes	Skin irritation, mucous membrane irritation, eye irritation, with prolonged contact causing inflammation.	Wear chemical protective gloves. egg; plc. Chemical goggles and Safety glasses with side shields.
111.	O-phenylene diamine	Yes	Skin corrosion, serious eye damage, respiratory sensitization, germ cell mutagenicity.	Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
112.	Phthalimide	Yes	Can cause respiratory irritation and eye irritation in some persons.	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs.
113.	P-choro benzaldehyde	Yes	Skin corrosion, serious eye irritation, specific target organ toxicity.	Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.
114.	Phthalic acid	Yes	If Swallowed diarrhoea Vomiting Gastrointestinal Complaints If inhaled caught Dyspnoea Irritation to respiratory tract	Chemical protection gloves are suitable Provide fresh air in all cases of doubt or when symptoms Persis seek medical advice
115.	N-phenyl anthranilic acid	Yes	Causes Skin irritation and Causes serious eye irritation If in halation of	Protective gloves protective clothing safety goggles do not eat during or smoke during work. Removing contaminated skin rinsing with plenty of water.

			dust may causes irritation of the respiratory system cough.	
116.	Phenyl acetic acid	Yes	Cause respiratory Tract irritation skin may be harmful if absorbed through skin causes skin irritation eyes causes eye irritation.	Removing contaminated skin rinsing with plenty of water.
117.	Picric acid	Yes	If swallowed inhaled or absorbed through the skin inhalation of dust may causes lung damage Chronic exposure may cause liver or kidney damage It is irritating to the skin and eyes and may cause an allergic skin reaction.	Removing contaminated clothes rinsing skin with plenty Transfer promptly to a medical facility and wear a masks and proper clothing.
118.	P-toluidine	Yes	It causes cancer If swallowed skin irritation causes serious eye irritation.	Wash Skin thoroughly after handling take of contaminated clothes and wash it before reuse.
119.	Pyrocatechol	Yes	Extremely hazardous in case of skin contact Eye contact of this material can cause eye irritation and damage in some person.	Remove the contaminated clothes as possible protecting your own hands and your body Avoid all personal contact including inhalation.
120.	Polyvinyl alcohol	Yes	Due to having high chlorine content creates high pollutions in the forms of dioxides.	a) PVC pipe can be cut using several different tools such as a ratchet cutter. b) Wear a hand glove while working with it.
121.	Phenolphthalein	Yes	a) It may cause kidney injury. If inhaled, it may cause respiratory tract irritation	a) Stored in a cool, dry place. Stored in a tightly closed container.
122.	P-hydroxy benzoic acid	Yes	a) It causes severe eye irritation. b) If inhaled, dust in irritating to the respiratory tract. c) It causes skin irritation.	a) Take a hand glove while touching it. b) Always wear a face mask while working with it.
123.	Phosphorus pentoxide	Yes	Cause chemical burns to the respiratory tract harmful if inhaled.	a) Stored in a tightly closed container. b) It is very reacting nonmetal so it stored in kerosene.

			It is a toxic reagent causes severe pain, nausea, vomiting etc.	
124.	Phthalic anhydride	Yes	Cough. Sore throat. Wheezing. Skin redness, Pain, eye redness, pain, abdominal pain	Use local exhaust or breathing protection. Protective gloves. Protective clothing. Wear safety goggles or eye protection in combination with breathing protection.
125.	Pine oil	Yes	a) It causes nervous system depression. b) It irritates the skin.	Use local exhaust or breathing protection. Protective gloves. Protective clothing. Wear safety goggles or eye protection in combination with breathing protection.
126.	Paraffin	Yes	Burning paraffin wax candles gives off harmful fumes which is linked to asthma and lung cancer.	Perform pulse oximetry and gives supplemental oxygen if indicated.
127.	P-bromo benzaldehyde	Yes	Very toxic in case of eye contact, toxic in case of ingestion or inhalation and slightly toxic in case of skin contact.	Wash Skin thoroughly after handling take of contaminated clothes and wash it before reuse.
128.	1-10-phenanthroline monohydride	Yes	It causes cancer. If swallowed skin irritation causes serious eye irritation.	Removing contaminated clothes rinsing skin with plenty Transfer promptly to a medical facility and wear a masks and proper clothing.
129.	Pyridine	Yes	It causes cancer. If swallowed skin irritation causes serious eye irritation.	Wash Skin thoroughly after handling take off contaminated clothes and wash it before reuse.
130.	Propan-2-ol (iso propyl alcohol)	Yes	If swallowed inhaled or absorbed through the skin inhalation of dust may causes lung damage Chronic exposure may cause liver or kidney damage It is irritating to the skin and eyes and may cause an allergic skin reaction.	Removing contaminated clothes rinsing skin with plenty Transfer promptly to a medical facility and wear a masks and proper clothing.
131.	Petroleum benzene	Yes	Very toxic in case of eye contact, toxic in case of ingestion or	Removing contaminated clothes rinsing skin with plenty Transfer promptly to a medical facility and wear a masks and proper clothing.

			inhalation and slightly toxic in case of skin contact.	
132.	Petroleum benzine	Yes	a) Highly flammable liquid and vapours. b) Causes eye irritation	Keep away from heat, hot surface sparks, open flames and other ignition sources. If on skin, wash with plenty of soap and water.
133.	Petroleum ether	Yes	a) Harmful when inhaled can cause dizziness and drowsiness. b) Adverse health effects may include skin, irritation , headache etc.	The person into fresh air. If not breathing give artificial respiration.
134.	Phenol	Yes	a) Contact with skin it causes severe skin burns and eye damage. b) It also causes respiratory irritation. Toxic to aquatic life.	In order to be protect from it avoid inhalation of dust and mist, wear gloves.
135.	Phenyl hydrazine	Yes	a) After inhalation due to haemolysis it can cause anaemia and headache and cause jaundice in severe. b) It is also toxic to aquatic organism as well.	Specific treatment for exposure consists of through washing of all exposure skin areas with soap and water.
136.	P-choro acetophenone	Yes	a) Harmful if swallowed, respiratory tract irritation. b) Causes serious eye damage.	Wear positive pressure self contained breathing apparatus. Wear chemical protective clothing that is specially recommended by the manufacturer.
137.	P-choro phenol	Yes	a) Short term exposure to	Can be prevented if it is used in short amount. But for cases get

			large amount of PCP can cause harmful effects on kidney, et b) Contact with PCP can irritate skin, eyes and mouth	medical attention.
138.	P-anisaldehyde (4-methoxy benzaldehyde)	Yes	a) Skin: May cause skin irritation. b) Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.	a) Protective gloves. Protective clothing. b) Rinse mouth. Refer for medical attention.
139.	Propanoic acid	Yes	a) Flammable above 54C explosive vapour/air mixture may be formed. b) Inhalation: burning sensation, cough, shortness of breath, sore throat.	a) No open flames, no sparks and no smoking. b) Use ventilation, local exhaust or breathing protection.
140.	Resorcinol	Yes	a) Combustible. b) Inhalation: abdominal pain, blue lips; fingernails and skin, confusion convulsions, cough, dizziness. c)Skin: Redness, pain.	a) No open flames; prevent build-up of electrostatic charges. b) Use local exhaust or breathing protection c) Protective gloves, protective clothing.
141.	Rubin-S	Yes	a) Combustible. Highly explosive b) Skin: Redness. c)Eyes: Redness, pain	a) No open flames. b) Use protective gloves, protective clothing.
142.	Rectified spirit	Yes	a) Highly flammable. b) Inhalation: cough, dizziness, headache, shortness of breath. c)Skin: Dry skin redness d) Eye: Redness, pain, blurred vision	a) No open flames, No sparks and No smoking. b) Use ventilation. use local exhaust or breathing protection.
143.	Rhizomic acid (sodiumrhodizonate)	Yes	a) Maybe combustible at high temperature. b) Inhalation: Cough, Dizziness, shortness of breathing protection. c)Skin: Dry skin redness, d) Eye: Redness, pain.	a) No open flames. b) Use local exhaust or breathing protection. c)Protective gloves, protective clothing.

144.	Salicylic acid	Yes	Cough, sore throat, skin redness, eye redness pain, vomiting ringing in case ears.	Use local exhaust or breathing protection, protective gloves, wear safety goggles, do not smoke or drink during work.
145.	Silica gel 100-200 mesh for column chromatography	Yes	a) Combustible. Highly explosive b) Skin: Redness. c)Eyes: Redness, pain	a) No open flames. b) Use protective gloves, protective clothing.
146.	Starch	No		
147.	Sulphonic acid	Yes	Skin redness pain, burning serration, symptoms may be delayed, eye redness pain.	Use local exhaust or breathing protection, protective gloves, wear safety goggles, do not smoke or drink during work, Wash hands before eating.
148.	Sulphur powder	Yes	Breathing in sulphur dust can irritate the airways or cause coughing, it can also be irritating to skin and eyes.	Use local exhaust or breathing protection, protective gloves, wear safety goggles, do not smoke or drink during work, Wash hands before eating.
149.	Salicylaldimine	Yes	- Harmful if swallowed, causes skin irritation, Causes serious eye irritation.	Use local exhaust or breathing protection, protective gloves, wear safety goggles, do not smoke or drink during work, Wash hands before eating.
150.	Sucrose	No		
151.	Silica gel for TLC	No		
152.	Salicylaldehyde	Yes	(a)Flammable liquids H227, combustible liquid H302 is harmful if swallowed. (b)H311 toxic in contact with skin, H315 causes skin irritation.	(a) H302+H352 if on skin: - wash with plenty of soap and water. (b)H305+H315+H338 if in eyes: - rinse cautiously with water for several minutes remove contact lenses, if present.
153.	Silicon oil	No		
154.	Sodium lactate60%	No		
155.	Sodium propionate	No		
156.	Tetra butyl alcohol	Yes	Irritate skin or eyes. Toxicity of single doses is usually low but high doses can produce a sedative or aesthetic.	Use protective gloves and clothing while handling. Keep away from heat, sparks and flame.

157.	Tetra butyl ammonium bromide	Yes	(a) Inhalation May be harmful if inhaled. Causes respiratory tract irritation. (b) May be harmful if swallowed. (c) Skin May be harmful if absorbed through skin	(a)Avoid breathing vapors, mist or gas. (b)Ensure adequate ventilation. (c)Avoid breathing dust.
158.	Urea	Yes	Introduction into the alimentary tract can cause poisoning. Syndrome include, salvation etc.	Airways intervention should be aggressive. Provide warmed humidified oxygen.
159.	Vanadium pentoxide	Yes	a) cardiac and vascular disease. b) Damage to the nervous system.	If inhaled move to fresh air. If not breathing, give artificial respiration.