SECTION 1: Identification of the substance/mixture and of the company

1.1 Product identifier

- Product Name: **BILIRUBIN- Jendrassik (TOTAL + DIRECT)**

1.2 Relevant identified uses of the substance or mixture and uses advised against

- BioScien reagent for the in-vitro quantitative determination of total or direct bilirubin in human serum and plasma on both automated and manual system.

1.3 Details of the supplier of the safety data sheet

- Name of Manufacturer: Arena BioScien, SEA
- Address of Manufacturer: Block 5, Street 9 Ismailia free zone. Ismailia- Egypt
- Telephone: +202 21813500/ +201113102057
- Email: admin@arenabioscientific.com

SECTION 2 Hazards identification

-Primary Routes of Entry: Inhalation, ingestion, skin and / or eye contact.

-Inhalation: Inhalation of Vapours can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract, and in severe cases, pulmonary edema, circulatory failure, and death.

-Ingestion: Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. May cause nausea, vomiting, and diarrhea, and in severe cases, death.

-Skin Contact: Can cause redness and pain.

-Eye Contact: If the liquid or Vapours of this product come in contact with the eyes, can damage the eyes.

-Chronic Exposure: N/A

-Medical Conditions Aggravated by Exposure:

Persons with pre- existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

-Health Effects:

The vapours or liquid can rapidly injure exposed tissue, cause skin and eye damage, and irritate mucous membranes and the respiratory tract. Health hazards given on this data sheet apply to concentrated solutions of hydrochloric acid. Hazards of dilute solutions may be reduced, depending upon the concentration.

SECTION 3 Composition/information on ingredients

3.1 Substances

Chemical Name	CAS #	% W/V	Exposure Limits in Air				
			ACGIH		OSHA		OTHER
			TLV	STEL	PEL	STEL	NIOSH REL
Hydrochloric acid	7647-01-0	2.0%	N / A	5 ppm C	N / A	5 ppm C	5ppm C

3.2 Mixtures

- This product does not contain any hazardous substances at the concentration limits given in Regulation (EC) No. 1272/2008 and OSHA Hazard Communication Standard 29 CFR 1910.1200.

SECTION 4 First aid measures

4.1 Description of first aid measures

- General

In case of doubt, or when symptoms persist, seek medical attention.

In general, this product is not hazardous to humans or animals, but like any other chemical, it should be treated with care, respect, and common sense.

- Contact with skin

Remove contaminated clothing.

SECTION 4 First aid measures (continued…)

Wash affected area with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention. Contaminated clothing should be laundered before reuse.

- Contact with eyes

If substance has gotten into eyes, immediately wash out with plenty of water for at least 15 minutes. Irrigate eyes thoroughly while lifting eyelids. Seek medical advice if necessary.

- Ingestion

Rinse mouth with water (do not swallow).
Never make an unconscious person vomit or drink fluids.
If medical advice is needed, have product container or label at hand.

- Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

- The most important known symptoms are described in the labeling (see Section 2.2) and/or in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

SECTION 5 Fire-fighting measures

- Flash Point (Method used): N/A Flammable Limits – LEL: N/A UEL: N/A
- Extinguishing Media:

Use fire extinguishing media appropriate for site conditions.

-Special Fire Procedures:

Structural firefighting gear and self-contained breathing apparatus will provide adequate protection if this product is in a fire area.

-Unusual Fire and Explosion Hazards:

This solution is corrosive and presents a severe contact hazard to firefighters. If this product contacts metals, flammable hydrogen gas may be released.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Shut off all ignition sources.
- Use non-sparking hand tools.
- Avoid raising dust.
- Remove contaminated clothing.
- Wear protective clothing as per Section 8.
- Wash thoroughly after dealing with spillage.

6.2 Environmental Precautions

- Do not allow to enter public sewers and watercourses.
- Avoid scattering in the environment.

6.3 Methods and material for containment and cleaning up

- Absorb spillage in inert material and shovel up.
- Place in sealable container.
- Seal containers and label them.
- Ventilate the area and wash spill site after material pick-up is complete.
- Dispose of contaminated materials and wastes in accordance with local/national/international regulations.

6.4 Reference to other sections

- See Section 7.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

- Do not breathe dust.
- Avoid contact with skin and eyes.
- Do not eat, drink, or smoke when using this product.
- Ensure adequate ventilation.
- Eyewash bottles should be available.
- Wash hands thoroughly after using this substance.

7.2 Conditions for safe storage, including any incompatibilities

- Storage temperature: see component label
- Store in a well-ventilated place. Keep container tightly closed.
- Store in a dry place.
- Keep away from: heat sources, acids.

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

- There are no recommended or established controls for this product.

8.2 Exposure controls

- Eyewash bottles should be available.
- Engineering controls should be provided to prevent the need for ventilation.
- No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved dust mask, NIOSH N95 (US) or type FFP1 (EN143) dust masks.
- Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
- Wear safety glasses approved to standard for ANSI Z87 or EN 166.
- Wear suitable protective clothing in accordance with good chemical hygiene practices.



Gloves | Safety Glasses | Lab Coat

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance: Homogenous, liquid.
- Odor: No information available
- pH: 4.0
- Melting point/Range: N/A
- Boiling Point/Range: N/A
- Flashpoint : No information available
- Evaporation Rate(nBuAc = 1): N/A
- Flammability: No information available
- Vapor Pressure, mm Hg @ 20oC: N/A
- Vapor Density(air = 1): N/A
- Specific Gravity (water = 1): N/A
- Solubility in water: Soluble
- Partition Coefficient (n-Octanol/Water): No information available

SECTION 9 Physical and chemical properties (continued…)

- Explosive Properties: Product does not present an explosion hazard
- Oxidizing Properties: No information available

9.2 Other information

- No information available

SECTION 10 Stability and reactivity

10.1 Reactivity

- No information available

10.2 Chemical stability

- Considered stable under normal conditions.

10.3 Possibility of hazardous reactions

- No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid

- Excess heat, flame, or pressure.

10.5 Incompatible materials

- Incompatible with materials such as cyanides, sulfides, sulfites, and formaldehyde.

10.6 Hazardous Decomposition Products

- When heated to decomposition, emits toxic and corrosive fumes.

SECTION 11 Toxicological information

11.1 Information on toxicological effects

- Hydrochloric acid: eye irritancy (rabbit)-1% solution/20sec., comeal scarring; Eye irritancy (rabbit)= 5mg/30sec, mild; eye irritancy (rabbit)=100mg/rinse, mild; skin irritancy(rabbit)=0.5ml/17% solution/4hours, corrosive burns.
- Target organ effects: Eyes and skin.
- Carcinogenicity: N/A
- Mutagenicity: No evidence of mutagenic effects.
- Teratogenicity: No information available

SECTION 12 Ecological information

12.1 Environmental Fate / Stability:

- If concentrated Hydrochloric acid is released to the soil, it is not expected to biodegrade and may leach into ground water.

12.2 Effect of Material on plants or animals: N/A

12.3 Effect of Chemical on Aquatic Life: N/A

SECTION 13 Disposal considerations

13.1 Waste treatment methods

- Disposal should be in accordance with local, regional, national, and/or international regulations.
- Do not discharge into drains or the environment, dispose to an authorized waste collection point.
- Do not reuse empty containers.

13.2 Classification (REACH)

- Waste Codes in accordance with the European Waste catalogue (EWC) are origin-defined.

Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.

SECTION 14 Transport information

14.1 UN Number

- Not classified as hazardous for transport

14.2 UN Proper Shipping Name

- Not applicable

SECTION 14 Transport information (continued…)

14.3 Transport hazard class(es)
- Not applicable

14.4 Packing group
- Not applicable

14.5 Environmental hazards
- Not Classified

14.6 Special precautions for user
- Not Classified

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code
- Not Classified

14.8 Domestic Surface Transport (US DOT)
- Proper Shipping Name: Not applicable
- DOT UN No.: Not applicable
- DOT Hazard Class: Not applicable
- DOT Packing Group: Not applicable

14.9 International Road/Rail (ADR/RID)
- Proper Shipping Name: Not applicable
- ADR UN No.: Not applicable
- ADR Hazard Class: Not applicable
- ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

14.10 Ocean/Sea (IMO/IMDG)
- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable
- IMDG Hazard Class: Not applicable
- IMDG Packing Group: Not applicable

14.11 Air (ICAO/IATA)
- Proper Shipping Name: Not applicable
- ICAO Un No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- This Safety Data Sheet is provided in compliance with the EC Directive 1907/2006- 453/2010, WHMIS 2015 requirements as specified in the Hazardous Products Act (HPA) and the Hazardous Products Regulations (HPR), and with the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe.

SECTION 16 Other information

Date of Preparation: September 2019
Revision: Rev. 0
Replaces: New issue
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