

Bilirubin Auto Total FS Reagent R1

Material number 1 0811 R1

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1. Product and company identification

Product identifier

Trade name: Bilirubin Auto Total FS Reagent R1
As part of the kits: 1 0811 XX XX XXX
(The positions X code different packages.)

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

General use: Reagent for in-vitro diagnostic use
For professional use only

Details of the supplier of the safety data sheet

Company name: DiaSys Diagnostic Systems GmbH
Street/POB-No.: Alte Strasse 9
Postal Code, city: 65558 Holzheim
WWW: <http://www.diasys.de>
E-mail: mail@diasys.de
Telephone: +49 (0) 6432-9146-0
Telefax: +49 (0) 6432-9146-32
Dept. responsible for information:
Corporate headquarters, Telephone: +49 (0) 6432-9146-0, Email: mail@diasys.de

Emergency phone number

Infraserv, Telephone: +49 (0) 69-305-6418

2. Hazards identification

Emergency overview

Appearance: Physical state at 68 °F and 101.3 kPa: liquid
Color: colorless, clear
Odor: odorless
Classification: Corrosive to Metals - Category 1; Skin Irritation - Category 2; Eye Damage - Category 1; Specific Target Organ Toxicity (Repeated Exposure) - Category 2;

Hazard symbols:



Signal word:

Danger

Hazard statements:

May be corrosive to metals.
Causes skin irritation.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

Keep only in original container.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN: Wash with plenty of water/soap.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Absorb spillage to prevent material damage.



SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

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Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

Hazards not otherwise classified

A corrosive effect cannot be ruled out because of the pH value.
see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: aqueous solution

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 7647-01-0	Hydrochloric acid	1 - 5 %	Corrosive to Metals - Category 1. Skin Corrosion - Category 1B. Specific Target Organ Toxicity (Single Exposure) - Category 3.
CAS 57-09-0	Cetrimonium bromide	1 - 2 %	Acute Toxicity - oral - Category 4. Skin Irritation - Category 2. Eye Damage - Category 1. Specific Target Organ Toxicity (Single Exposure) - Category 3. Specific Target Organ Toxicity (Repeated Exposure) - Category 2. Aquatic toxicity - acute - Category 1.
CAS 9002-93-1	Octylphenoxypolyethoxyethanol	< 1 %	Acute Toxicity - oral - Category 4. Eye Damage - Category 1. Aquatic toxicity - chronic - Category 2.
CAS 9036-19-5	Octylphenol, ethoxylated	< 1 %	Acute Toxicity - oral - Category 4. Eye Damage - Category 1. Aquatic toxicity - chronic - Category 2.

4. First aid measures

General information:	If medical advice is needed, have product container or label at hand. First aider: Pay attention to self-protection!
In case of inhalation:	Provide fresh air. Seek medical aid in case of troubles.
Following skin contact:	After contact with skin, wash immediately with plenty of water. Take off contaminated clothing and wash it before reuse. Cover with sterile dressing material to protect against infection. Seek medical attention.
After eye contact:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently seek the immediate attention of an ophthalmologist.
After swallowing:	Rinse mouth immediately and drink plenty of water. Do not induce vomiting. Do not try to neutralize. Immediately get medical attention.



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Most important symptoms/effects, acute and delayed

Causes serious eye damage. Causes skin irritation. May cause damage to organs through prolonged or repeated exposure.

A corrosive effect cannot be ruled out because of the pH value. May cause respiratory irritation.

Information to physician

Treat symptomatically.

5. Fire fighting measures

Flash point/flash point range:

not combustible

Auto-ignition temperature: No data available

Suitable extinguishing media:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

Specific hazards arising from the chemical

Fires in the immediate vicinity may cause the development of dangerous vapors.

In case of fire may be liberated: Hydrogen chloride, hydrogen bromide (HBr), nitrogen oxides (NO_x), carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters:

In case of surrounding fires: Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Do not allow fire water to penetrate into surface or ground water.

6. Accidental release measures

Personal precautions:

Provide adequate ventilation. Do not breathe mist/vapors/spray. Wear appropriate protective equipment. Take off contaminated clothing and wash it before reuse.

Avoid contact with skin and eyes. Keep unprotected people away.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains.

Methods for clean-up:

Soak up with absorbent materials such as sand, siliceus earth, acid- or universal binder.

Store in special closed containers and dispose of according to ordinance. Final cleaning.

7. Handling and storage

Handling

Advices on safe handling:

Provide adequate ventilation, and local exhaust as needed. Do not breathe mist/vapors/spray. Avoid contact with skin and eyes. Wear appropriate protective equipment. Wash hands before breaks and after work. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.



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Storage

Requirements for storerooms and containers:

Keep containers tightly closed and at a temperature between 35.6 °F and 46.4 °F. Do not freeze. Protect from light. Keep sterile.

Unsuitable materials: Metals

Keep only in original container.

Hints on joint storage: Keep away from food, drink and animal feedingstuffs.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
7647-01-0	Hydrochloric acid	USA: ACGIH: Ceiling	2.98 mg/m ³ ; 2 ppm (A4)
		USA: NIOSH: Ceiling	7 mg/m ³ ; 5 ppm
		USA: OSHA: Ceiling	7 mg/m ³ ; 5 ppm

Engineering controls

Provide adequate ventilation, and local exhaust as needed.

See also information in chapter 7, section storage.

Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Wear suitable protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Glove material: Nitrile rubber - Layer thickness: 0.11 mm.

Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product.

General hygiene considerations:

Avoid contact with skin and eyes. Wash hands before breaks and after work. Do not breathe mist/vapors/spray. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse. Have eye wash bottle or eye rinse ready at work place.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Physical state at 68 °F and 101.3 kPa: liquid

Color: colorless, clear

Odor: odorless

Odor threshold: No data available

pH value: 0.78 - 0.85



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Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	not combustible
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	1.0124 g/mL
Water solubility:	at 68 °F: completely miscible
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	No data available

10. Stability and reactivity

Reactivity:	May be corrosive to metals.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	No hazardous reaction when handled and stored according to provisions.
Conditions to avoid:	Protect against heat /sun rays.
Incompatible materials:	Alkalis, metals
Hazardous decomposition products:	No hazardous decomposition products when regulations for storage and handling are observed.
Thermal decomposition:	No data available



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11. Toxicological information

Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.
Acute toxicity (oral): Based on available data, the classification criteria are not met.
Acute toxicity (dermal): Lack of data.
Acute toxicity (inhalative): Lack of data.
Skin corrosion/irritation: Skin Irritation - Category 2 = Causes skin irritation.
Serious eye damage/irritation: Eye Damage - Category 1 = Causes serious eye damage.
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Lack of data.
Germ cell mutagenicity/Genotoxicity: Lack of data.
Carcinogenicity: Lack of data.
Reproductive toxicity: Lack of data.
Effects on or via lactation: Lack of data.
Specific target organ toxicity (single exposure): Based on available data, the classification criteria are not met.
Specific target organ toxicity (repeated exposure): Specific Target Organ Toxicity (Repeated Exposure) - Category 2 = May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: Lack of data.

Other information: Chronic toxicity carcinogenic effect:
Information about hydrochloric acid:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed

Symptoms

A corrosive effect cannot be ruled out because of the pH value. May cause respiratory irritation.

12. Ecological information

Ecotoxicity

Aquatic toxicity: Harmful effects on water organisms by modification of pH-value.
Information about Cetrimonium bromide:
Daphnia toxicity:
EC50 Daphnia magna (Big water flea): 0.03 mg/L/48h
Fish toxicity:
LC50 Brachydanio rerio (zebra-fish): 0.3 mg/L/96h

Mobility in soil

No data available



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Persistence and degradability

Further details: Information about Cetrimonium bromide:
Biodegradability: 100 %/28 d. Readily degradable.

Additional ecological information

General information: Do not allow to enter into ground-water, surface water or drains.

13. Disposal considerations

Product

Recommendation: Special waste. Dispose of waste according to applicable legislation.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Non-contaminated packages may be recycled.

14. Transport information

USA: Department of Transportation (DOT)

Identification number: UN3264
Proper shipping name: UN 3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Hydrochloric acid), mixture
Hazard class or Division: 8
Packing Group: III
Labels: 8
Symbols: G
Special provisions: IB3, T7, TP1, TP28
Packaging – Exceptions: 154
Packaging – Non-bulk: 203
Packaging – Bulk: 241
Quantity limitations – Passenger aircraft / rail: 5 L
Quantity limitations – Cargo only: 60 L
Vessel stowage – Location: A
Vessel stowage – Other: 40





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Sea transport (IMDG)

UN number: UN 3264
Proper shipping name: UN 3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid), mixture
Class or division, Subsidiary risk: Class 8, Subrisk -
Packing Group: III
EmS: F-A, S-B
Special provisions: 223, 274
Limited quantities: 5 L
Excepted quantities: E1
Contaminated packaging - Instructions: P001, LP01
Contaminated packaging - Provisions: -
IBC - Instructions: IBC03
IBC - Provisions: -
Tank instructions - IMO: -
Tank instructions - UN: T7
Tank instructions - Provisions: TP1, TP28
Stowage and handling: Category A. SW2
Properties and observations: Causes burns to skin, eyes and mucous membranes.
Marine pollutant: no
Segregation group: 1

Air transport (IATA)

UN/ID number: UN 3264
Proper shipping name: UN 3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid), mixture
Class or division, Subsidiary risk: Class 8
Packing Group: III
Hazard label: Corrosive
Excepted Quantity Code: E1
Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y841 - Max. Net Qty/Pkg. 1 L
Passenger and Cargo Aircraft: Pack.Instr. 852 - Max. Net Qty/Pkg. 5 L
Cargo Aircraft only: Pack.Instr. 856 - Max. Net Qty/Pkg. 60 L
Special provisions: A3 A803
Emergency Response Guide-Code (ERG): 8L



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15. Regulatory information

National regulations - U.S. Federal Regulations

- Hydrochloric acid: TSCA Inventory: listed; EPA flags T
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 3
OSHA Carcinogen: not listed
NTP Rating: not listed
Clean Air Act:
Accidental Release Prevention: Threshold 5000 lbs. / Basis for listing = a
Hazardous Air Pollutants: Code X
Clean Water Act:
Hazardous Substances: RQ 5000 lbs.
Other Environmental Laws:
CERCLA: RQ 5000 lbs.
SARA Title III Section 302, EHS: TPQ 500 lbs. / RQ 5000 lbs.
SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard
NIOSH Recommendations:
Occupational Health Guideline: 0332
OSHA Process Safety Management: Threshold 5000 lbs.
- Cetrimonium bromide: TSCA Inventory: listed
TSCA HPVC: not listed
- Octylphenoxypolyethoxyethanol: TSCA Inventory: listed; EPA flags XU
TSCA HPVC: not listed
- Octylphenol, ethoxylated: TSCA Inventory: not listed
This substance is exempt from TSCA inventory listing requirements.

National regulations - U.S. State Regulations

- Hydrochloric acid: Delaware Air Quality Management List:
DRQ: 5000 - RQ State: Federal Regulations Apply
Idaho Air Pollutant List:
Title 585 -- AAC: 0.375 -- EL: 0.05 -- OEL: 7.5 -- Title 586: -
Massachusetts Haz. Substances codes: 2,4,5 *E* F6 F8 F9
Minnesota Haz. Substance:
Codes: AO - Ratings: 9.4 - Status: Title III. TRI.
New Jersey Extraordinarily Hazardous Substances:
EPA Threshold: 5000
NJ Threshold: 2000 - NJ Group: I - NJ Table: I Part A - NJ Basis: Not on List
New Jersey RTK Hazardous Substance:
DOT: 1789 - Sub No.: 1012 - TPQ: -
New York List of Hazardous Substances:
RQ -- Air: 5000 - RQ -- Land: 100 - Note: No Note Associated with this chemical.
Pennsylvania Haz. Substance code: E
Washington Air Contaminant:
Ceiling: 5 ppm / 7 mg

National regulations - Great Britain

Hazchem-Code: 2X

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16. Other information

Text for labeling: Contains 1 - 5 % Hydrochloric acid, 1 - 2 % Cetrimonium bromide, < 1 % Octylphenoxypolyethoxyethanol, < 1 % Octylphenol, ethoxylated. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:

Health: 2 (Moderate)

Fire: 0 (Minimal)

Reactivity: 1 (Slight)

HMIS Version III Rating:

Health: 2 (Moderate) - Chronic effects

Flammability: 0 (Minimal)

Physical Hazard: 1 (Slight)

Personal Protection: X = Consult your supervisor

HEALTH	*	2
FLAMMABILITY		0
PHYSICAL HAZARD		1
		X

Reason of change: ADR/RID 2019

Date of first version: 7/12/2007

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.