



# Safety Data Sheet

Analyticon® Biotechnologies AG

analyticon

according to Regulation (EC) No 1907/2006

## ISE Etching Solution

Revision date: 23.11.2017

Product code: 003B4014700

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

#### 1.1. Product identifier

ISE Etching Solution

Product group: Endprodukt

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

##### Use of the substance/mixture

In-vitro-Diagnostics

#### 1.3. Details of the supplier of the safety data sheet

Company name: Analyticon® Biotechnologies AG  
Street: Am Mühlenberg 10  
Place: D-35104 Lichtenfels  
Telephone: +49 (0) 6454/7991-0  
e-mail: support@analyticon-diagnostics.com  
Contact person: Zentrale  
Internet: <http://www.analyticon-diagnostics.com>  
Telefax: +49 (0) 6454/7991-30  
Telephone: +49 (0) 6454/7991-0

#### 1.4. Emergency telephone number:

Giftnotruf Mainz: +49 (0) 6131 / 19240

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Regulation (EC) No. 1272/2008

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

#### 2.2. Label elements

##### Regulation (EC) No. 1272/2008

Signal word: Warning

Pictograms:



##### Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

##### Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures



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## Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
1341-49-7	Ammonium bifluoride; ammonium hydrogen difluoride			<0,3 %
	215-676-4	009-009-00-4		
	Acute Tox. 3, Skin Corr. 1B; H301 H314			
7647-14-5	sodium chloride			<0,03 %
	231-598-3			

Full text of H and EUH statements: see section 16.

## SECTION 4: First aid measures

## 4.1. Description of first aid measures

## General information

Move victim out of danger zone.

## After inhalation

Provide fresh air.

## After contact with skin

After contact with skin, wash immediately with: Water. Change contaminated clothing.

## After contact with eyes

If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

## After ingestion

If swallowed, immediately drink: Water. Rinse mouth thoroughly with water. Seek medical advice immediately.

Caution if victim vomits: Risk of aspiration!

## 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

## 5.1. Extinguishing media

## Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. The product itself does not burn.

## 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

## Additional information

Suppress gases/vapours/mists with water spray jet.

## SECTION 6: Accidental release measures

## 6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Wear personal protection equipment.

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**6.2. Environmental precautions**

- Do not allow to enter into surface water or drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Do not allow to enter into soil/subsoil.

**6.3. Methods and material for containment and cleaning up**

- Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

- Use only in well-ventilated areas.
- The floor should be leak tight, jointless and not absorbent.
- All work processes must always be designed so that the following is excluded: inhalation. skin contact. Eye contact.

**Advice on protection against fire and explosion**

- Usual measures for fire prevention.
- When using do not smoke.

**Further information on handling**

- When using do not eat, drink, smoke, sniff.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

- Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place.

**Advice on storage compatibility**

- The product is not: Combustible. Exclude sources of ignition-no smoking

**Further information on storage conditions**

- Recommended storage temperature: of °C: 5 up to °C: 25
- Protect against: heat. UV-radiation/sunlight.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
16984-48-8	Fluoride (inorganic as F)	-	2.5		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

**8.2. Exposure controls****Appropriate engineering controls**

- If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Protective and hygiene measures**

- Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink. Wash hands before breaks and after work.

**Eye/face protection**

- Eye protection: Tightly sealed safety glasses.

**Hand protection**

- Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): DIN EN 374
- Breakthrough times and swelling properties of the material must be taken into consideration.

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**Skin protection**

Suitable protective clothing: Lab apron.  
Footwear: Chemical resistant safety shoes.

**Respiratory protection**

Respiratory protection necessary at: insufficient ventilation. Handling larger quantities.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state: liquid  
Colour: colourless  
Odour: characteristic

**Test method**

pH-Value (at 20 °C): 3

**Changes in the physical state**

Melting point: The product has not been tested.  
Initial boiling point and boiling range: 100 °C

**Explosive properties**

The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.

**Oxidizing properties**

Not oxidizing.

Vapour pressure: Corresponds to the vapour pressure of water.

Density: 1 g/cm<sup>3</sup>

Water solubility: completely miscible

**SECTION 10: Stability and reactivity****10.4. Conditions to avoid**

May cause decomposition by long-term light influence.

**10.6. Hazardous decomposition products**

Carbon dioxide. Carbon monoxide. Nitrogen oxides (NO<sub>x</sub>).

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**

No information available.



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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
1341-49-7	Ammonium bifluoride; ammonium hydrogen difluoride				
	oral	LD50 130 mg/kg	Rat		
7647-14-5	sodium chloride				
	oral	LD50 3550 mg/kg	Ratte		
	dermal	LD50 10000 mg/kg	Kaninchen		
	inhalative (1 h) aerosol	LC50 42000 mg/l	Ratte		

**Irritation and corrosivity**

Irritating to eyes. After skin contact: irritant. No information available.

**Sensitising effects**

May cause sensitization by inhalation. No information available.

**Carcinogenic/mutagenic/toxic effects for reproduction**

No information available.

**STOT-repeated exposure**

No information available.

**Specific effects in experiment on an animal**

No information available.

**Additional information on tests**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 12: Ecological information****12.1. Toxicity**

No data available

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1341-49-7	Ammonium bifluoride; ammonium hydrogen difluoride					
	Acute fish toxicity	LC50 237 mg/l	96 h	Brachydanio rerio		
7647-14-5	sodium chloride					
	Acute fish toxicity	LC50 5840 mg/l	96 h	Lepomis macrochirus		
	Acute crustacea toxicity	EC50 1661 mg/l	48 h	Daphnia magna		

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
1341-49-7	Ammonium bifluoride; ammonium hydrogen difluoride	-4,37



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**12.4. Mobility in soil**

No data available

**12.6. Other adverse effects**

No data available

**Further information**

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

Dispose of waste according to applicable legislation.

Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".

**Waste disposal number of waste from residues/unused products**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of used product**

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals  
Classified as hazardous waste.

**Waste disposal number of contaminated packaging**

150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); mixed packaging

**Contaminated packaging**

Water (with cleaning agent). Completely emptied packages can be recycled.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number:**

UN 2817

**14.2. UN proper shipping name:**

AMMONIUM HYDROGENDIFLUORIDE SOLUTION

**14.3. Transport hazard class(es):**

8

**14.4. Packing group:**

III

Hazard label:

8+6.1



Classification code:

CT1

Limited quantity:

5 L

Transport category:

3

Hazard No:

86

Tunnel restriction code:

E

**Other applicable information (land transport)**

E1

**Inland waterways transport (ADN)**



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**14.1. UN number:** UN 2817  
**14.2. UN proper shipping name:** AMMONIUM HYDROGENDIFLUORIDE SOLUTION  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8+6.1



Classification code: CT1  
Special Provisions: 802  
Limited quantity: 5 L

#### Other applicable information (inland waterways transport)

E1

#### Marine transport (IMDG)

**14.1. UN number:** UN2817  
**14.2. UN proper shipping name:** AMMONIUM HYDROGENDIFLUORIDE SOLUTION  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8+6.1



Special Provisions: 223  
Limited quantity: 5 L  
EmS: F-A, S-B

#### Other applicable information (marine transport)

E1

#### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number:** UN2817  
**14.2. UN proper shipping name:** AMMONIUM HYDROGENDIFLUORIDE SOLUTION  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8+6.1



Limited quantity Passenger: 1 L  
IATA-packing instructions - Passenger: 852  
IATA-max. quantity - Passenger: 5 L  
IATA-packing instructions - Cargo: 856  
IATA-max. quantity - Cargo: 60 L

#### Other applicable information (air transport)

E1

: Y841

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture



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#### National regulatory information

Water contaminating class (D): -- not water contaminating

### SECTION 16: Other information

#### Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*