

Reagent for ACETOIN test (weight)

Creation date	13th March 2015	Version	4.0
Revision date	05th January 2024		

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

1.1. Product identifier	Reagent for ACETOIN test (weight)
Substance / mixture	substance
Number	MLT00016
Chemical name	1-naphtol
CAS number	90-15-3
Index number	604-029-00-5
EC (EINECS) number	201-969-4
Other substance name	

Činidlo pro test ACETOIN (navážka); VPT I

**1.2. Relevant identified uses of the substance or mixture and uses advised against
Substance's intended use**

The Reagent for ACETOIN test is supplementary colour forming reagent for the test for the formation of acetoin (the Voges-Proskauer reaction) included in some of MIKROLATEST ® kits.

The use descriptors

PC 21 Laboratory chemicals

Substance uses advised against

The product should not be used in ways other than those referred in Section 1.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Name or trade name	Erba Lachema s.r.o.
Address	Karásek 2219/1d , Brno, 62100 Czech Republic
Identification number (CRN)	26918846
VAT Reg No	CZ26918846
Phone	+420 517 077 111
E-mail	msds@erba.com
Web address	www.erbalachema.com

Competent person responsible for the safety data sheet

Name	Erba Lachema s.r.o.
E-mail	msds@erba.com

1.4. Emergency telephone number

European emergency number: 112 112

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification of the substance in accordance with Regulation (EC) No 1272/2008**

The substance is classified as dangerous.

Acute Tox. 4, H302+H312
Skin Irrit. 2, H315
Eye Dam. 1, H318
STOT SE 3, H335

Most serious adverse effects on human health and the environment

Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Harmful if swallowed or in contact with skin.

2.2. Label elements**Hazard pictogram****Signal word**

Danger

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Dangerous substance

1-naphtol
(Index: 604-029-00-5; CAS: 90-15-3)

Hazard statements

H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H302+H312	Harmful if swallowed or in contact with skin.

Precautionary statements

P261	Avoid breathing dust.
P264	Wash hands and exposed parts of the body thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Dust may form explosive mixture with air.

SECTION 3: Composition/information on ingredients**3.1. Substances****Chemical characterization**

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 604-029-00-5 CAS: 90-15-3 EC: 201-969-4	substance main component 1-naphtol	100	Acute Tox. 4, H302, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335	

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures**

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Cardiac arrest - provide indirect cardiac massage immediately. Symptoms of poisoning may manifest after many hours, medical supervision is necessary for 48 hours after the accident.

If inhaled

Discontinue the exposure, remove casualty to fresh air, keep at rest and seek medical advice. No mouth-to-mouth or mouth-to-nose breathing. Use a respiratory bag or breathing device. Examine for edema. In case of unconsciousness, transport the patient in a stable position on the side.

If on skin

Remove contaminated clothes. After contact with skin, wash immediately with soap and water. Provide medical treatment if skin irritation persists.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Transport victim to the doctor.

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If swallowed

DO NOT INDUCE VOMITING! Rinse mouth with water, give 1/2 liter of lukewarm water to drink, seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed**If inhaled**

May cause respiratory irritation, asthma, headache. Inhaling vapours can cause corrosion of the breathing system. Cough. Stiffness. Breath arrest.

If on skin

Causes skin irritation.

If in eyes

Causes serious eye damage.

If swallowed

Irritation, nausea, stomach and intestinal problems, vomiting and diarrhea. Blood pressure drop. Convulsions. Unconsciousness. Cardiovascular disorders. Corrosion of the digestion system can occur.

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

Symptoms of poisoning may be delayed for several hours, ensure medical supervision for 48 hours after the accident. If lung irritation occurs, administer dexamethasone (aerosol). In lung irritation, first treatment with dexamethasone dosing aerosol. Prophylaxis of infection. Gastric lavage when swallowed. Symptomatic treatment.

More information

Aspiration can lead to pulmonary edema and pneumonia. Causes hemolysis (red blood cell breakdown). Damage: Liver; Kidneys; Eye nerve; Central nervous system disorders. Causes serious eye damage.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, dry chemical powder or water spray.

Unsuitable extinguishing media

not available

5.2. Special hazards arising from the substance or mixture

Intense heating forms explosive mixtures with air. Toxic gases are formed when heated or in the event of fire.

5.3. Advice for firefighters

Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment for work. Avoid dust formation, do not breathe. Provide sufficient ventilation. Follow the principles of safe work in the chemical laboratory. Follow the instructions in the Sections 7 and 8.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water. In case of entry into waterways or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Place the product mechanically in an appropriate manner. Store contaminated material in containers for hazardous waste collection. Dispose of the collected material according to the instructions in the section 13.

6.4. Reference to other sections

See the Section 7, 8 and 13.

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

Avoid dust formation. Ensure good ventilation / exhaustion at the workplace. Do not inhale dust. Prevent contact with skin and eyes. Use personal protective equipment as per Section 8. Provide written rules on safety, human health and environmental protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Protect from heat. Keep away from sources of ignition - do not smoke. Do not store together with oxidizing agents and strong alkalis. Keep locked up or accessible only to authorized persons or persons authorized by them. Protect from exposure to light.

Storage temperature min 2 °C, max 25 °C

7.3. Specific end use(s)

For in vitro diagnostic devices.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

none

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

Hand protection: Protective gloves resistant to the product. When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

Respiratory protection

If all workplace limits are observed and good ventilation is ensured, no special precautions necessary. For short-term or low loads, use a breathing apparatus with a filter, for intensive or long-term loads, a breathing apparatus independent of the surrounding air must be used.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

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

Physical state	solid
Colour	colourless
Odour	phenolic
Melting point/freezing point	97 °C
Boiling point or initial boiling point and boiling range	280 °C
Flammability	little flammable substance
Lower and upper explosion limit	data not available
Flash point	125 °C
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Solubility in water	insoluble
Partition coefficient n-octanol/water (log value)	2.7 log Pow
Vapour pressure	1.33 hPa at 94 °C
Density and/or relative density	

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Density	1.095 g/cm ³
Relative vapour density	data not available
Particle characteristics	data not available
Form	colorless solid

9.2. Other information

Ignition temperature	541 °C
Explosive properties	The product does not have explosive properties. May form flammable or explosive mixtures with air.

SECTION 10: Stability and reactivity**10.1. Reactivity**

The substance is non-flammable. When used in the standard way, there is not any dangerous reaction with other substances.

10.2. Chemical stability

The product is stable under normal conditions. To avoid thermal decomposition do not overheat.

10.3. Possibility of hazardous reactions

Reactions with strong oxidizing agents, strong alkali and acid chlorides.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Avoid strong alkalis, oxidizing agents, halogens, anhydrides and acid chlorides.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire. Sensitive to the presence of air.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

No toxicological data is available for the substance.

Acute toxicity

Harmful if swallowed or in contact with skin.

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Route of exposure	Parameter	Value	Exposure time	Species	Sex
Dermal	LD ₅₀	880 mg/kg		Rabbit	

1-naphtol					
Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD ₅₀	1870 mg/kg		Rat	
Dermal	LD ₅₀	880 mg/kg		Rabbit	
Inhalation	LC ₅₀	0.42 mg/l	1 hour	Rat	

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage. Danger of going blind.

Respiratory or skin sensitisation

No data available for the substance. Based on available data the classification criteria are not met.

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Germ cell mutagenicity

No data available for the substance. Based on available data the classification criteria are not met.

Carcinogenicity

No data available for the substance. Based on available data the classification criteria are not met.

Reproductive toxicity

No data available for the substance. Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause respiratory irritation.

Toxicity for specific target organ - repeated exposure

No data available for the substance. Based on available data the classification criteria are not met.

Aspiration hazard

No data available for the substance. Based on available data the classification criteria are not met.

More information

Harmful if swallowed. May damage the cornea. Harmful in contact with skin. It is absorbed through the skin. May cause pulmonary edema.

11.2. Information on other hazards

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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

Based on available data the classification criteria are not met.

Acute toxicity

1-naphtol				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	3.57 mg/l	96 hours	Fish (Pimephales promelas)	
LC ₅₀	0.75 mg/l	96 hours	Fish (Lepomis macrochirus)	

12.2. Persistence and degradability

Data not available. The substance is biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

12.4. Mobility in soil

No data available for the substance.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms as it does not meet the criteria set out in section B of Regulation (EU) No 2017/2100.

12.7. Other adverse effects

Water hazard class 1 (Self-assessment): slightly hazardous for water.

SECTION 13: Disposal considerations

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13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

Packaging waste type code

15 01 10* packaging containing residues of or contaminated by hazardous substances

(*) - Hazardous waste according to Directive 2008/98/EC on hazardous waste

SECTION 14: Transport information**14.1. UN number or ID number**

UN 2811

14.2. UN proper shipping name

TOXIC SOLID, ORGANIC, N.O.S. (1-Naphtol)

14.3. Transport hazard class(es)

6.1 Toxic substances

14.4. Packing group

III

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

Additional information

Hazard identification No.

60

UN number

2811

Classification code

T2

Safety signs

6.1



Tunnel restriction code

(E)

Air transport - ICAO/IATA

Packaging instructions passenger

670

Cargo packaging instructions

677

Marine transport - IMDG

EmS (emergency plan)

F-A, S-A

MFAG

110

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SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

not available

SECTION 16: Other information**A list of standard risk phrases used in the safety data sheet**

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H302+H312	Harmful if swallowed or in contact with skin.

Guidelines for safe handling used in the safety data sheet

P261	Avoid breathing dust.
P264	Wash hands and exposed parts of the body thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry

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LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
log K _{ow}	Octanol-water partition coefficient
NPK	Maximum admissible concentration
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible Exposure Limit
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
Skin Irrit.	Skin irritation
STOT SE	Specific target organ toxicity - single exposure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

For in vitro diagnostic use only.

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

The version 4.0 replaces the SDS version from 02 February 2023. Changes were made in sections 2, 12, 15 and 16.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.