

Revision date: 28.02.2020
Replacement of version 0016 of 07.01.2019

Version: 0017



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

1.1 Product identifier

Trade name	ArgentQuick, Silver Staining Kit Stopper
Product number	anam0025
Item code	GF10015
Formulation	Stopper
Formulation number	11/05

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

Appropriate use:
The product is used for electrophoresis in analytical laboratories.

1.3 Details of the supplier of the safety data sheet

anamed Elektrophorese GmbH
Ringstraße 4
D-64401 Gross-Bieberau
Telephone: +49-6162-809840
e-mail-address of the competent person responsible for this Safety Data Sheet:
urban-finking.gefstoff@t-online.de

Technical contact:

anamed Elektrophorese GmbH
Frau Dr. Vera Kreis
Telephone +49-6162-809840
Fax +49-6162-8098420

1.4 Emergency telephone number

Poison Control Center Mainz (Giftinformationszentrum Mainz)	or local poison centers
Telephone +49-6131 19 2 40	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Eye Irrit. 2; H319

Trade name:	ArgentQuick, Silver Staining Kit Stopper	
Company/Undertaking:	anamed Elektrophorese GmbH	
	Ringstraße 4, D-64401 Gross-Bieberau	
Telephone:	+49-6162-809840	Revision date: 28.02.2020
Product number:	anam0025	

2.2 Label elements

Hazard pictogram(s):



Signal word(s):	Warning	
Product identifier:	ArgentQuick, Silver Staining Kit Stopper	
Hazard statements:	H319	Causes serious eye irritation.
Precautionary statements:	P 280 P305 + P351 + P338 P337 + P313	Wear eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Supplemental hazard information:	Not required.	
Remark:	According to Annex I section 1.5.2 of Regulation (EC) No 1272/2008, the hazard statements and the precautionary statements linked to the hazard category "Eye irritation of category 2" may be omitted from the label elements required by Article 17 where the contents of the package do not exceed 125 ml.	

2.3 Other hazards

The product is classified as slightly hazardous to water.
The mixture does not contain any substances classified as PBT/vPvB in a concentration of 0.1% or more.

SECTION 3: Composition/information on ingredients

3.2 Mixtures **Stopper**
REACH registration number:
- Citric acid: 01-2119457026-42-XXXX

3.2.1 Characterisation
The product consists of an aqueous solution of citric acid.

3.2.2 Substances presenting a health/environmental hazard within the meaning of Regulation (EC) No 1272/2008

CAS No	EC No	Identification	% by weight	Classification
5949-29-1	201-069-1	citric acid monohydrate	> 20	Eye Irrit. 2; H319

See subsection 2.2 for further details. Full text of the hazard statements see subsection 16.2.

3.2.3 Substances for which Union workplace exposure limits have been assigned and which are not already included under point 3.2.2 (see also Section 8.)

No substances.

3.2.4 Additional information

Citric acid: national occupational exposure limit values for Germany have been assigned in accordance with TRGS 900 for the anhydrous substance (see subsection 8.1).

SECTION 4: First aid measures

4.1 Description of first aid measures

4.1.1 General information

Change contaminated clothing and wash before reuse.
In the immediate working surroundings emergency eye wash must be installed. Label their location conspicuously.

4.1.2 In case of inhalation

Remove the casualty into fresh air.
In the event of symptoms take medical treatment.

4.1.3 In case of contact with skin

In case of contact with skin rinse thoroughly with plenty of water.
In the event of symptoms take medical treatment.

4.1.4 In case of contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do.

Trade name:	ArgentQuick, Silver Staining Kit Stopper	
Company/Undertaking:	anamed Elektrophorese GmbH	
	Ringstraße 4, D-64401 Gross-Bieberau	
Telephone:	+49-6162-809840	Revision date: 28.02.2020
Product number:	anam0025	

4.1.5 *In case of ingestion*

If swallowed, rinse mouth with water (only if the person is conscious).

Do not induce vomiting.

Let water be swallowed in little sips (dilution effect).

Put victim at rest. Take medical treatment immediately.

4.2 *Most important symptoms and effects, both acute and delayed*

After swallowing of large amounts irritations of mucous membranes, coughing, pain, bloody vomiting.

Irritating to eyes.

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

Treat symptomatically. No information available.

SECTION 5: Firefighting measures

5.1 *Extinguishing media*

5.1.1 *Suitable extinguishing media*

Water spray jet, carbon dioxide, dry powder.

5.1.2 *Unsuitable extinguishing media*

Full water jet.

5.2 *Special hazards arising from the substance or mixture*

In the event of fire the following can be released: carbon oxides.

Risk of formation of toxic pyrolysis products.

5.3 *Advice for firefighters*

Wear self-contained breathing apparatus.

Do not inhale explosion and combustion gases.

Cool endangered containers with water spray jet.

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 *Personal precautions, protective equipment and emergency procedures*

6.1.1 *For non-emergency personnel*

Ensure adequate ventilation. Use personal protective clothing.

Use respiratory protection if exposed to vapours.

Keep away from unprotected people.

6.1.2 *For emergency responders*

For suitable fabric for personal protective clothing see Section 8.

6.2 *Environmental precautions*

Do not discharge into the drains, the aquatic environment and soil.

6.3 *Methods and material for containment and cleaning up*

Pick up with suitable material. Dispose of absorbed material in accordance with the regulations.

Send in suitable containers for recovery or disposal.

Clean contaminated floors and objects thoroughly with plenty of water observing environmental regulations.

6.4 *Reference to other sections*

For personal protective equipment see also Section 8.

For disposal considerations see also Section 13.

SECTION 7: Handling and storage

7.1 *Precautions for safe handling*

7.1.1 *Advice on safe handling*

Keep container tightly closed; open and handle with care.

Avoid contact with eyes.

Comply with the minimum standards in accordance with TRGS 500¹.

7.1.2 *Advice on general occupational hygiene*

Do not inhale vapours. Avoid contact with eyes and skin.

At work do not eat, drink, smoke or take drugs.

Change contaminated clothing and wash before reuse.

Wash hands before breaks and after work. Use barrier skin cream.

In the immediate working surroundings emergency eye wash must be installed. Label their location conspicuously.

Trade name:	ArgentQuick, Silver Staining Kit Stopper	
Company/Undertaking:	anamed Elektrophorese GmbH	
	Ringstraße 4, D-64401 Gross-Bieberau	
Telephone:	+49-6162-809840	Revision date: 28.02.2020
Product number:	anam0025	

7.2 Conditions for safe storage, including any incompatibilities**7.2.1 Advice on protection against fire and explosion**

None.

7.2.2 Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool place.

Unsuitable materials for container: metal.

7.2.3 Advice on storage compatibility

Do not store with strong oxidising agents and bases.

The information about joint storage given in Table 2 of TRGS 510¹ must be observed.**7.2.4 Further information on storage conditions**

Keep only in the original container. Protect from sunlight. Storage temperature: 2 – 8°C.

Shelf life: 8 months.

7.2.5 Storage class (for Germany only)LGK 12 (non-combustible liquids) in accordance with TRGS 510¹.**7.3 Specific end use(s)**

The product is only intended for the uses mentioned under subsection 1.2.

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

CAS No	Identification	Limit values	Remarks
77-92-9	citric acid	2 mg/m ³ (inhalable fraction and vapour) 2 mg/m ³ (inhalable fraction)	National limit values – eight hours Germany Switzerland
		4 mg/m ³ (inhalable fraction and vapour) 4 mg/m ³ (inhalable fraction)	National limit values – short term Germany Switzerland

PNEC values**Additional limit values for citric acid monohydrate in accordance with the registration dossier:**

aquatic, fresh water:	0.44 mg/l
aquatic, marine water:	0.044 mg/l
aquatic, sewage treatment plant:	1000 mg/l
sediment, fresh water:	34.6 mg/kg _{dw}
sediment, marine water:	3.46 mg/kg _{dw}
soil environment:	33.1 mg/kg _{dw}

The methods for measuring chemical agents in workplace atmosphere must meet the general requirements of EN 482 and EN 689.

8.2 Exposure controls**8.2.1 Appropriate engineering controls**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See also subsection 7.1.

The effectiveness of suitable protective measures must be controlled.

Suitable assessment methods are described in the German TRGS 402¹.

8.2.2 Individual protection measures, such as personal protective equipment

Personal protective equipment needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer/supplier of the personal protective equipment.

8.2.2.1 Eye/face protection

Tightly fitting safety glasses in accordance with EN 166 (i.e. safety glasses with side shields).

8.2.2.2 Skin protection**Hand protection:**

Protective gloves.

Suitable: protective gloves of natural rubber (0.5 mm; breakthrough time ≥ 8 h);
protective gloves of neoprene (0.5 mm; breakthrough time ≥ 8 h);
protective gloves of nitrile rubber (0.35 mm; breakthrough time ≥ 8 h);
protective gloves of butyl rubber (0.5 mm; breakthrough time ≥ 8 h);
protective gloves of fluorinated rubber (0.4 mm; breakthrough time ≥ 8 h);
protective gloves of PVC (0.5 mm; breakthrough time ≥ 8 h).

Totally unsuitable: protective gloves of leather or textile.

Wear cotton undermitten if possible.

Under practical conditions, the maximum wearing period can be significantly lower.

The protective gloves to be used must comply with the specifications of the standard EN 374.

Body protection:

Closed work clothing.

Trade name:	ArgentQuick, Silver Staining Kit Stopper	
Company/Undertaking:	anamed Elektrophorese GmbH	
	Ringstraße 4, D-64401 Gross-Bieberau	
Telephone:	+49-6162-809840	Revision date: 28.02.2020
Product number:	anam0025	

8.2.2.3 Respiratory protection

With correct and proper use, and adequate ventilation of the working place, respiratory protection is not required. In case of inadequate ventilation, and in case of formation of vapours/aerosols, wear respiratory protection. Information on appropriate respirator protection is currently not available.

The limitations in wearing time according to the the DGUV Regel 112-190² (rule of the German employers' liability insurance association) for the use of respirators have to observed.

8.2.2.4 Thermal hazards

Not relevant.

8.2.3 Environmental exposure controls

See Section 6.

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

Physical state:	liquid
Colour:	colourless
Odour:	odorless
Odour threshold:	not relevant
pH (as supplied):	not determined
pH (of an aqueous solution):	not determined
Melting point/freezing point (°C):	not determined
Boiling point and boiling range (°C):	not determined
Flash point (°C), closed cup:	not relevant
Evaporation rate:	no data available
Flammability (solid, gas):	not relevant
Upper flammability or explosive limit:	not relevant
Lower flammability or explosive limit:	not relevant
Vapour pressure (20°C) (mbar):	no data available
Vapour density (20°C):	no data available
Density (g/cm ³):	not determined
Relative density:	not determined
Solubility in water:	miscible
Soluble in:	not determined
Partition coefficient: n-octanol/water:	- 1.72 (20°C) (citric acid, anhydrous substance) (LOGKOW [®] database)
Auto-ignition temperature (°C):	no data available
Decomposition temperature (°C):	no data available
Viscosity:	no data available
Explosive properties:	not explosive
Oxidising properties:	not relevant

9.2 Other information

None.

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

No data available for the mixture.

10.2 Chemical stability

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Reaction with strong oxidising agents and bases possible.

10.4 Conditions to avoid

When used as intended, no hazardous reactions known.

10.5 Incompatible materials

Reaction with strong oxidising agents and bases possible.

Possible corrosive effect on materials made of copper, zinc, aluminium and their alloys.

10.6 Hazardous decomposition products

When used as intended, no hazardous decomposition products known.

For hazardous combustion products see subsection 5.2.

Trade name:	ArgentQuick, Silver Staining Kit Stopper	
Company/Undertaking:	anamed Elektrophorese GmbH	
	Ringstraße 4, D-64401 Gross-Bieberau	
Telephone:	+49-6162-809840	Revision date: 28.02.2020
Product number:	anam0025	

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects**
The mixture has not been tested.
- 11.1.1 Acute toxicity**
- | | | | |
|----------------------|-----------|--------------------|---|
| LD50 rat, oral | (mg/kg) | 3000 | (citric acid, anhydrous substance) (RTECS) |
| LD50 rat, dermal | (mg/kg) | > 2000 | (citric acid, anhydrous substance)
(OECD Test Guideline 402) |
| LC50 rat, inhalation | (mg/l/4h) | No data available. | |
- 11.1.2 Skin corrosion/irritation**
Irritant effect on skin (rabbit) Slight irritations (citric acid, anhydrous substance) (RTECS)
- 11.1.3 Serious eye damage/irritation**
Irritant effect on eyes (rabbit) Severe irritations (citric acid, anhydrous substance) (RTECS)
- 11.1.4 Respiratory or skin sensitisation**
No evidence of sensitive properties of citric acid has been found.
- 11.1.5 Germ cell mutagenicity**
The mixture does not contain substances classified as germ cell mutagens.
- 11.1.6 Carcinogenicity**
The mixture does not contain substances classified as carcinogenic.
- 11.1.7 Reproductive toxicity**
The mixture does not contain substances classified as toxic for the reproduction.
- 11.1.8 Specific target organ toxicity (STOT)-single exposure**
The mixture does not contain substances classified as being a specific target organ toxicant after single exposure.
- 11.1.9 Specific target organ toxicity (STOT)-repeated exposure**
The mixture does not contain substances classified as being a specific target organ toxicant after repeated exposure.
- 11.1.10 Aspiration hazard**
The mixture does not contain aspiration toxicants.
- 11.1.11 Symptoms related to the physical, chemical and toxicological characteristics**
Irritating to eyes.
Substance which occurs in the human body under physiological conditions.
After swallowing of large amounts irritations of mucous membranes, coughing, pain, bloody vomiting.
- 11.1.12 Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Irritating to eyes.
Substance which occurs in the human body under physiological conditions.
After swallowing of large amounts irritations of mucous membranes, coughing, pain, bloody vomiting.

SECTION 12: Ecological information

- 12.1 Toxicity**
- Aquatic toxicity**
- | | | |
|---------------------|--------------------|--|
| 96 h LC50 (fish) | 440 - 760 mg/l | (Leuciscus idus; golden orfe) (IUCLID) |
| 48 h EC50 (daphnia) | No data available. | |
| 72 h IC50 (algae) | No data available. | |
- Behaviour in sewage works:**
Treat by state-of-the-art technology before discharging into drains.
- 12.2 Persistence and degradability**
The product has not been tested.
Citric acid: biodegradation 98%/2d (OECD Test Guideline 302 B); readily biodegradable.
Chemical oxygen demand (COD) 685 mg/g (citric acid, anhydrous substance)
(external safety data sheet)
Biochemical oxygen demand (BOD₅) 481 mg/g (citric acid, anhydrous substance)
(external safety data sheet)
Total oxygen demand (TOD) 686 mg/g (citric acid, anhydrous substance)
(external safety data sheet)
AOX-hint Not to apply.
- 12.3 Bioaccumulative potential**
Partition coefficient n-octanol/water: - 1.72 (20°C) (citric acid, anhydrous substance)
(LOGKOW® database)
No bioaccumulation is to be expected.
- 12.4 Mobility in soil**
The product has not been tested.
- 12.5 Results of PBT and vPvB assessment**
The mixture does not contain any substances classified as PBT/vPvB in a concentration of 0.1% or more.

Trade name:	ArgentQuick, Silver Staining Kit Stopper	
Company/Undertaking:	anamed Elektrophorese GmbH	
	Ringstraße 4, D-64401 Gross-Bieberau	
Telephone:	+49-6162-809840	Revision date: 28.02.2020
Product number:	anam0025	

12.6 Other adverse effects

Ozone depletion potential No data available.

Photochemical ozone creation potential No data available.

Global warming potential No data available.

The product is classified as slightly hazardous to water.

Harmful effect due to shift of the pH-value.

Contains according to the formulation following heavy metals and compounds of EC-Directives 2006/11/EC**and 80/68/EEC:**

None.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Waste disposal according to official state regulations. Consult the local waste disposal expert about waste disposal. Sewage disposal must be avoided.

Disposal operations/recovery operations according to Directive 2008/98/EC

Disposal operations: D 9 Physico-chemical treatment

Recovery operations: R 3 Recycling/reclamation of organic substances which are not used as solvents

Properties of waste which render it hazardous in accordance with Annex III of Directive 2008/98/EC

HP 4: Irritant – skin irritation and eye damage

13.1.1 Product / unused product

Waste disposal corresponding to European Waste Catalogue. Wastes must be classified with respect to their origin and depending on different processing steps. The waste codes mentioned as follows are only constituted as our recommendations. Referring to the particular case they should be completed or revised.

EC waste code: 16 05 08

Waste notation: Discarded organic chemicals consisting or containing hazardous substances

13.1.2 Contaminated packaging

Recommendation: Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Recommended cleansing agent: Water

Packaging that cannot be cleaned:

EC waste code: 15 01 10

Waste notation: Packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information**14.1 UN number**

No dangerous good in accordance with the UN Model Regulations (ADR/RID/ADN/IMDG/ICAO/IATA).

14.2 UN proper shipping name

Not relevant.

14.3 Transport hazard class(es)

Not relevant.

14.4 Packing group

Not relevant.

14.5 Environmental hazards

Not relevant.

14.6 Special precautions for user

Not relevant.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not relevant.

Trade name:	ArgentQuick, Silver Staining Kit Stopper	
Company/Undertaking:	anamed Elektrophorese GmbH	
	Ringstraße 4, D-64401 Gross-Bieberau	
Telephone:	+49-6162-809840	Revision date: 28.02.2020
Product number:	anam0025	

SECTION 15: Regulatory information

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

15.1.1 *Information regarding relevant Union safety, health and environmental provisions*

- Regulation (EC) No 1907/2006: The mixture does not contain substances classified as substances of very high concern (SVHC) in accordance with Article 57 of the regulation.
- Conditions of restriction in accordance with Regulation (EC) No 1907/2006: Annex XVII, No 3
- Observe employment restrictions under the law for the protection of young people at work (94/33/EC).
- Observe Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

15.1.2 *Information regarding national laws/national measures that may be relevant (for Germany only)*

- Restriction of occupation: Youth Employment Protection Act has to be observed.
- Major-accident Ordinance: Not relevant
- Fire and explosion hazards: Not relevant
- Regulation on clean air (TA Luft): Not relevant
- Water hazard class: WGK 1 – slightly hazardous to water (deduction of the WGK according to Annex 1 No 5.2 AwSV)³
The German Ordinance on facilities for handling substances that are hazardous to water (AwSV) has to be observed
- German Ordinance on Hazardous Substances (in accordance with EC-Directive 98/24/EC): Articles 6, 7, 8, 9 and 14 must be observed.
- Technical Rules for Hazardous Substances¹: TRGS 400, 500, 510, 555
- Rules of the employers' liability insurance association²: DGUV Regel 112-190, 112-192, 112-195
- In accordance with Article 16e of the German Chemicals Act there is an obligation to notify the product at the Federal Institute of Risk Assessment (BfR).
- Number of the product in the Poison Information Database: 5818046

15.2 *Chemical safety assessment*

No chemical safety assessment has been carried out for a substance in the product.

SECTION 16: Other information

- 16.1 *Keeping (restrictions)* Article 8 (5) and (6) German Ordinance on Hazardous Substances (for Germany only)
- Supply* University (college, academy), industry consumer
- 16.2 *Full text of the hazard statements referred to under subsection 2.1 and point 3.2.2 of the Safety Data Sheet* H319 Causes serious eye irritation.
- 16.3 *Key to abbreviations and acronyms used in the safety data sheet*
- ADN: Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
- ADR: Accord européen relatif au transport international des marchandises dangereuses par route
- AOX: adsorbable organically bound halogens
- AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Ordinance on facilities for handling substances that are hazardous to water)
- ICAO/IATA: International Civil Aviation Organisation/International Air Transport Association-Dangerous Goods Regulations
- IMDG-Code: International Maritime Dangerous Goods-Code
- IUCLID: International Uniform Chemical Information Database
- KBwS: Commission for the Evaluation of substances hazardous to waters (Kommission Bewertung wassergefährdende Stoffe)
- L GK: Lagerklasse (storage class)
- OECD: Organisation for Economic Co-operation and Development
- PBT: persistent, bioaccumulative and toxic
- PNEC: Predicted No-Effect Concentration
- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
- RTECS: Registry of Toxic Effects of Chemical Substances
- TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Hazardous Substances)
- vPvB: very persistent and very bioaccumulative

Trade name: **ArgentQuick, Silver Staining Kit Stopper**
Company/Undertaking: **anamed Elektrophorese GmbH**
Ringstraße 4, D-64401 Gross-Bieberau
Telephone: **+49-6162-809840**
Product number: **anam0025**

Revision date: 28.02.2020

16.4 Literature references and sources for data¹ <http://www.baua.de>² <http://www.arbeitssicherheit.de>³ <http://www.umweltbundesamt.de>**16.5 Method used for the classification of the mixture**

The classification was undertaken in accordance with the classification criteria of Annex I of Regulation (EC) No 1272/2008.

16.6 Changes which have been made to the previous version of the safety data sheet

Revised sections: 1.3, 2.2, 8.1, 9.1, 12.2, 12.3, 15.1.1, 15.1.2, 16.4

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.

Compiled by:

Dr. Michael Urban**Fachberatung Gefahrstoff Gefahrgut**

Vogelbeerweg 3

D-26180 Rastede-Ipwege / Germany

Tel.: +49-4402-695620

Fax: +49-4402-695621