

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

1 Identification

- **Product identifier**
- **Trade name:** ATLUS ANTHRACENE TEST SOLUTION, 5.0 µg/uL
- **Article number** N2972055
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**

PerkinElmer, Inc.
710 Bridgeport Avenue
Shelton, Connecticut 06484 USA
CustomerCareUS@perkinelmer.com
203-925-4600

- **Emergency telephone number:**
CHEMTREC (within US) 800-424-9300
CHEMTREC (from outside US) +1 703-527-3887 (call collect)
CHEMTREC (within AU) +(61)-290372994

2 Hazard(s) identification

- **Classification of the substance or mixture**



Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS02, GHS07
- **Signal word** Danger

- **Hazard-determining components of labeling:**
acetonitrile

- **Hazard statements**
H225 Highly flammable liquid and vapor.
H312+H332 Harmful in contact with skin or if inhaled.
H319 Causes serious eye irritation.

- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.

(Contd. on page 2)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 1)

- P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Hazardous components:**

75-05-8	acetonitrile	80.0%
	Flam. Liq. 2, H225 Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2A, H319	

· **Additional Components**

7732-18-5	Water	19.9999%
-----------	-------	----------

(Contd. on page 3)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

120-12-7	anthracene	 Carc. 1B, H350 PBT	(Contd. of page 2) 0.0001%
----------	------------	---	-------------------------------

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Prevent seepage into sewage system, workpits and cellars.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

(Contd. on page 4)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 3)

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

75-05-8	acetonitrile	13 ppm
120-12-7	anthracene	48 mg/m ³

· **PAC-2:**

75-05-8	acetonitrile	50 ppm
120-12-7	anthracene	530 mg/m ³

· **PAC-3:**

75-05-8	acetonitrile	150 ppm
120-12-7	anthracene	3,200 mg/m ³

7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

75-05-8 acetonitrile		
PEL	Long-term value: 70 mg/m ³ , 40 ppm	
REL	Long-term value: 34 mg/m ³ , 20 ppm	
TLV	Long-term value: 34 mg/m ³ , 20 ppm	
	Skin	

· **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 5)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 4)

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles or safety glasses

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Clear

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 81 °C (177.8 °F)

· **Flash point:** 5 °C (41 °F)

(Contd. on page 6)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 5)

· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	525 °C (977 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	4.4 Vol %
Upper:	16 Vol %
· Vapor pressure at 20 °C (68 °F):	97 hPa (72.8 mm Hg)
· Density at 20 °C (68 °F):	0.82576 g/cm ³ (6.89097 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	20.0 %
VOC content:	0.00 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

USA

(Contd. on page 7)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 6)

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

75-05-8 acetonitrile

Oral	LD50	2730 mg/kg (rat)
Dermal	LD50	1250 mg/kg (rabbit)

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** Irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

120-12-7	anthracene	3
----------	------------	---

· **NTP (National Toxicology Program)**

120-12-7	anthracene	R
----------	------------	---

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

USA

(Contd. on page 8)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021




Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 7)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Dispose of container and materials in accordance with local, regional and national regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|----------------------------|
| · UN-Number | UN1648 |
| · DOT, ADR, IMDG, IATA | |
| · UN proper shipping name | Acetonitrile solution |
| · DOT | 1648 ACETONITRILE solution |
| · ADR | ACETONITRILE solution |
| · IMDG, IATA | |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · ADR | |
|  | |
| · Class | 3 (F1) Flammable liquids |
| · Label | 3 |
| · IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | II |
| · Environmental hazards: | |
| · Marine pollutant: | No |

(Contd. on page 9)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 8)

· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code): 33	
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· ADR	
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1648 ACETONITRILE SOLUTION, 3, II

15 Regulatory information

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

75-05-8	acetonitrile	80.0%
	Flam. Liq. 2, H225	
	Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2A, H319	
7732-18-5	Water	19.9999%
120-12-7	anthracene	0.0001%
	Carc. 1B, H350	
	PBT	

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

75-05-8	acetonitrile
120-12-7	anthracene

· TSCA (Toxic Substances Control Act):

75-05-8	acetonitrile	ACTIVE
7732-18-5	Water	ACTIVE

(Contd. on page 10)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 9)

120-12-7	anthracene	ACTIVE
----------	------------	--------

· **Hazardous Air Pollutants**

75-05-8	acetonitrile
120-12-7	anthracene

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

75-05-8	acetonitrile	CBD, D
120-12-7	anthracene	D

· **TLV (Threshold Limit Value established by ACGIH)**

75-05-8	acetonitrile	A4
---------	--------------	----

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product.

· **Department issuing SDS:** Environmental, Health and Safety

· **Contact:**

Within the USA: 1-(800)-762-4000

Outside the USA: 1-(203)-712-8488

(Contd. on page 11)

acc. to OSHA HCS

Printing date 07/28/2021

Review date 07/28/2021

Trade name: ATLUS ANTHRACENE TEST SOLUTION, 5.0 pg/uL

(Contd. of page 10)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

· * Data compared to the previous version altered.

USA