

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

1.1. Product identifier

Product form	:	Mixture
Product name	:	Mobile Phase for Nucleic Acid Analysis - Buffer B
Product code	:	562022-50, 553422, 553422-L, 553422-L4, 553422-L20
Other means of identification	:	Triethylammonium acetate buffer, Acetic acid, compound with N,N-diethylethanamine (1:1) in 25% acetonitrile.

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

Use of the substance/mixture : Buffer

1.3. Details of the supplier of the safety data sheet

ADS Biotec, Inc.
7409 Irvington Road
Omaha, NE 68122 - USA
support@adstiotec.com

1.4. Emergency telephone number

Emergency Contact Number : USA: 1-800-255-3924 (CHEMTEL 24hr) International: +1-813-248-0585 (CHEMTEL 24hr)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 2	H225
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Dermal)	H312
Acute Tox. 4 (Inhalation)	H332
Eye Irrit. 2A	H319

CLP Classification – Regulation (EC) No 1272/2008

Physical Hazards

- Flammable Liquids Category 2 (H225)

Health Hazards

- Acute oral toxicity Category 4 (H302)
- Acute dermal toxicity Category 4 (H312)
- Acute inhalation toxicity – vapors Category 4 (H332)
- Serious eye damage/eye irritation Category 2 (H319)

Environmental Hazards

- Based on available data, classification criteria are not met

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

GHS07

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapour
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) : 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
P243 - Take precautionary measures against static discharge

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P261 - Avoid breathing vapours
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell
P330 - If swallowed, rinse mouth
P303+P361+P353 - IF ON SKIN (or hair): Remove/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
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P370+P378 - In case of fire: Use water for extinction
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to licensed waste management site

Labelling according to (EC) No 1272/2008

The substance is classified and labelled according to the CLP

Hazard pictograms ((EC) No 1272/2008) :



GHS02



GHS07

Signal word ((EC) No 1272/2008) :

Danger

Hazard statements ((EC) No 1272/2008) :

H225 - Highly flammable liquid and vapour
H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H319 - Causes serious eye irritation

Precautionary statements ((EC) No 1272/2008) :

P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/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
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to licensed waste management site

2.3. Other hazards

GHS-US

Other hazards not contributing to the classification

: Vapours may form explosive mixture with air.

(EC) No 1272/2008

Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

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3.2. Mixture

Name	Product identifier	%	GHS-US classification
Acetonitrile	(CAS No) 75-05-8	20 - 30	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2A, H319
Triethylammonium acetate	(CAS No) 5204-74-0	1 - 5	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove to fresh air, keep the patient warm and at rest. If symptoms develop obtain medical attention.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. If symptoms develop obtain medical attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms develop obtain medical attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Give 100 - 200 ml of water to drink. If symptoms develop obtain medical attention.

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

- Symptoms/injuries after inhalation : Harmful if inhaled.
- Symptoms/injuries after skin contact : Harmful in contact with skin.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : Harmful if swallowed.

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 : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : On exposure to high temperature, may decompose, releasing explosive vapours. May form flammable/explosive vapour-air mixture.
- Reactivity : Stable under normal conditions.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.
- Protection during firefighting : Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all contact with skin, eyes, or clothing.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing and eye or face protection.
- Emergency procedures : Remove ignition sources. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wash spill area with soapy water.

6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : Avoid contact with skin, eyes and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.
Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container tightly closed.
Incompatible products : Acids. Strong bases. Metals. Oxidizing agent. Reducing agents. combustible materials.

7.3. Specific end use(s)

A component of systems for genetic analysis of nucleic acid samples in a professional diagnostic or research laboratory.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acetonitrile (75-05-8)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	70 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	40 ppm

8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation.
Personal protective equipment : Avoid all unnecessary exposure.
Hand protection : Wear chemically resistant protective gloves.
Eye protection : Safety glasses with face shield.
Skin and body protection : Use chemically protective clothing.
Respiratory protection : Wear suitable respiratory protective equipment.
Thermal hazard protection : Not required for normal conditions of use.
Environmental exposure controls : Avoid release to the environment.
Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : Colourless.
Odour : Sweet.
Odour threshold : No data available
pH : 7
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : 6 °C ACETONITRILE
Self ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available

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Relative vapour density at 20 °C	: 1.355
Relative density	: 0.97
Solubility	: Miscible with water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 3 - 16 vol % ACETONITRILE

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Nitrogen oxides. Ammonia. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.
Skin corrosion/irritation	: Not classified pH: 7
Serious eye damage/irritation	: Causes serious eye irritation. pH: 7
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed. Harmful in contact with skin.
Symptoms/injuries after inhalation	: Harmful if inhaled.
Symptoms/injuries after skin contact	: Harmful in contact with skin.
Symptoms/injuries after eye contact	: Causes serious eye irritation.

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Symptoms/injuries after ingestion : Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified.

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LC50 fish 1 g/l 96 h - (Mortality) Fathead minnow (*Pimephales promelas*)

LC50 other aquatic organisms 0.024 - 0.199 µg/L 4-72 h Benthosed clam (*Macoma nasuta*)

12.2. Persistence and degradability

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Persistence and degradability No information available.

12.3. Bioaccumulative potential

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Bioaccumulative potential No information available.

12.4. Mobility in soil

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Ecology - soil No information available.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ...

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1 UN-Number

ADR, IMDG, IATA: UN1993

14.2 UN proper shipping name

ADR: UN1993 FLAMMABLE LIQUID, N.O.S. (ACETONITRILE, TRIETHYLAMINE)

IMDG, IATA: FLAMMABLE LIQUID, N.O.S. (ACETONITRILE, TRIETHYLAMINE)

14.3 Transport hazard class(es)

ADR:

Class: 3 (F1) Flammable Liquids

Label: 3



IMDG, IATA:

Class: 3 Flammable Liquids

Label: 3



14.4 Packing group

ADR, IMDG, IATA: II

14.5 Environmental hazards

Marine pollutant: No

14.6 Special precautions for user

Warning: Flammable Liquids

Hazard identification number: 33

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EMS Number: F-E,S-E

Stowage Category: B

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

Not applicable

Transport/Additional Information:

ADR

- Limited Quantities (LQ): 1L
- Excepted Quantities (EQ): Code: E2
Maximum net quantity per inner packaging: 30mL
Maximum net quantity per outer packaging: 500mL
- Transport Category: 2
- Tunnel Restriction Code: D/E

IMDG

- Limited Quantities (LQ): 1L
- Excepted Quantities (EQ): Code: E2
Maximum net quantity per inner packaging: 30mL
Maximum net quantity per outer packaging: 500mL

UN "Model Regulation"

UN1993 FLAMMABLE LIQUID, N.O.S. (ACETONITRILE, TRIETHYLAMINE), 3, II

In accordance with DOT

- UN-No.(DOT) : 1648
- DOT Proper Shipping Name : Acetonitrile
- Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Hazard labels (DOT) : 3 - Flammable liquid



- Packing group (DOT) : II - Medium Danger
- DOT Packaging Exceptions (49 CFR 173.xxx) : 150
- DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
- DOT Packaging Bulk (49 CFR 173.xxx) : 242
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
- DOT Vessel Stowage Location : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Additional information

- Other information : No supplementary information available.

Transport by sea

- Proper Shipping Name (IMDG) : ACETONITRILE
- Class (IMDG) : 3 - Flammable liquids
- Packing group (IMDG) : II - substances presenting medium danger

Air transport

- Proper Shipping Name (IATA) : ACETONITRILE
- Class (IATA) : 3 - Flammable Liquids
- Packing group (IATA) : II - Medium Danger

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SECTION 15: Regulatory information

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

US Federal Regulations

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SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
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Triethylammonium acetate (5204-74-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Acetonitrile (75-05-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific toxic chemical listings)

RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb
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CLP Classification – Regulation (EC) No 1272/2008

Directive 2012/18/EU

Named dangerous substances - ANNEX I:

None of the ingredients is listed.

Seveso category:

P5c FLAMMABLE LIQUIDS

Qualifying quantity (tonnes) for the application of lower-tier requirements:

5,000 t

Qualifying quantity (tonnes) for the application of upper-tier requirements:

50,000 t

REGULATION (EC) No 1907/2006 ANNEX XVII (REACH):

Conditions of restriction: 3

CANADA

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WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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15.2. Chemical safety assessment

No additional information available

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed

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

15.3. US State regulations

Acetonitrile (75-05-8)

U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Abbreviations and acronyms : ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route). CAS (Chemical Abstracts Service) number. IARC (International Agency for Research on Cancer). IATA (International Air Transport Association). IMDG (International Maritime Dangerous Goods Code). RID (Règlement concernant le transport international ferroviaire de marchandises).

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H312	Harmful in contact with skin
H319	Causes serious eye irritation
H332	Harmful if inhaled

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NCEC SDS US GHS (Hazcom 2012)

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