

Concentrated Wash Solution

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

1.1 - Product identifier

Trade name/designation Concentrated Wash Solution

Chemical name

Product-type Mixture

Product code EU (Z313A), US (Z313AU)

Other trade name

Alba Concentrated Wash Solution

This product is part of the Alba Elution Kit. The other two components (Buffering Solution and Elution Solution) are not classified as hazardous.

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

| | |
|---------------------------------|---|
| <u>Relevant identified uses</u> | - For Acid elution of antibodies from intact red blood cells. |
|---------------------------------|---|

| | |
|-----------------------------|--------------------------------------|
| <u>Uses advised against</u> | - Use only for intended applications |
|-----------------------------|--------------------------------------|

1.3 - Details of the supplier of the safety data sheet

Alba Bioscience Limited
Allan-Robb Campus, 5 James Hamilton Way,
Milton Bridge, Penicuik
EH26 0BF, United Kingdom
+44 (0) 0131 357 3333

SDS Contact - English Speaking: Tel: +44 (0) 0131 357 3333 (09:00-17:00 Mon-Fri), email: customer.serviceeu@alivedx.com

Distributor

US Responsible Party (US Agent):
Alba Bioscience, Inc
171 North Aberdeen Street, Suite 400
Chicago, IL 60607
USA
1-888-284-1901

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email: customer.serviceus@alivedx.com

Manufacturer

Alba Bioscience Limited
Allan-Robb Campus
5 James Hamilton Way
Milton Bridge
Penicuik
EH26 0BF
United Kingdom

1.4 - Emergency telephone number

- 911 United States of America

SECTION 2: Hazards identification

Concentrated Wash Solution

2.1 - Classification of the substance or mixture

| | |
|---------------------|--------------------------------------|
| Acute Tox. 4 Dermal | Acute toxicity (dermal) - Category 4 |
| STOT SE 1 | STOT-single exposure - Category 1 |
| STOT RE 2 | STOT-repeated exposure - Category 2 |

2.2 - Label elements

Contains: sodium azide (CAS No.: 26628-22-8)

Signal word Danger

Hazard pictograms



Hazard statements

| | |
|------|---|
| H312 | Harmful in contact with skin |
| H370 | Causes damage to organs |
| H373 | May cause damage to organs through prolonged or repeated exposure |

Precautionary statements

| | |
|-----------|--|
| P260 | Do not breathe mist/vapours/spray. |
| P264 | Wash hands thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P280 | Wear protective gloves/protective clothing/eye protection. |
| P302+P352 | IF ON SKIN: Wash with plenty of water and soap. |
| P308+P311 | IF exposed or concerned: Call a POISON CENTER/doctor. |
| P312 | Call a POISON CENTER/a doctor if you feel unwell. |
| P314 | Get medical advice/attention if you feel unwell. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P405 | Store locked up. |
| P501 | Dispose of in accordance with national regulation. |

2.3 - Other hazards

Other hazards which do not result in classification

- Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides.
- No known test method can offer complete assurance that products derived from animal blood will not transmit infectious agents. Therefore, all blood derivatives should be considered potentially infectious. It is recommended that these reagents be handled using established good laboratory working practices.
- This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Concentrated Wash Solution

- This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

- -

- Hazards not otherwise classified (HNOC)
- Contact with acids liberates very toxic gas.

2.4. - Unknown acute toxicity

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

- Contains:
- Substance with a Community workplace exposure limit
- See section 8.

| Chemical name | No | % | Class | Spec. concentrations |
|--|--|---------|---|--|
| Bovine Serum Albumins, blood serum INCI: SERUM ALBUMIN | CAS No. : 9048-46-8 Index No. : EC No. : 232-936-2 | 1 - < 3 | Acute Tox. 4 Oral - H302 | Not applicable |
| sodium azide | CAS No. : 26628-22-8 Index No. : 011-004-00-7 EC No. : 247-852-1 | 1 | Acute Tox. 1 Dermal - H310 Acute Tox. 2 Inhalation - H330 Acute Tox. 2 Oral - H300 Eye Irrit. 2 - H319 Skin Irrit. 2 - H315 STOT RE 2 - H373 STOT SE 1 - H370 | ATE oral 27 ATE dermal 18 ATE Inhalation Dust/Mist 0.054 |

SECTION 4: First aid measures

4.1 - Description of first aid measures

Following inhalation

- Remove casualty to fresh air and keep warm and at rest.
- If breathing is irregular or stopped, administer artificial respiration.
- In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following skin contact

- After contact with skin, wash immediately with plenty of water and soap.
- Remove contaminated, saturated clothing immediately.
- In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
- Medical examination necessary even merely on suspicion of intoxication.
- Injection: Encourage bleeding and seek medical advice.

After eye contact

- Rinse immediately carefully and thoroughly with eye-bath or water.
- In case of eye irritation consult an ophthalmologist.

After ingestion

- Never give anything by mouth to an unconscious person or a person with cramps.
- Rinse mouth thoroughly with water.
- Do NOT induce vomiting.

Concentrated Wash Solution

- When in doubt or if symptoms are observed, get medical advice.

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

Symptoms and effects - Following inhalation

- May cause damage to organs.

- Organs affected:
- brain
- central nervous system
- gastrointestinal tract
- cardiovascular system

Symptoms and effects - Following skin contact

- Harmful in contact with skin.

- May cause damage to organs.
- Organs affected:
- brain
- cardiovascular system
- central nervous system
- gastrointestinal tract
- Frequently or prolonged contact with skin may cause dermal irritation.

Symptoms and effects - After eye contact

- No information available.

Symptoms and effects - After ingestion

- May be harmful if swallowed.
- May cause damage to organs.
- Organs affected:
- brain
- cardiovascular system
- central nervous system
- gastrointestinal tract

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

- Treat symptomatically.
- Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media

- ABC-powder
- Carbon dioxide (CO₂)
- Foam
- Extinguishing powder
- Water spray

Unsuitable extinguishing media

- Full water jet

Concentrated Wash Solution

5.2 - Special hazards arising from the substance or mixture

Special hazards arising from the substance or mixture - No information available.

Hazardous decomposition products

- Hazardous combustion products
- Carbon monoxide
- Carbon dioxide (CO₂)
- Metal oxide smoke, toxic
- Phosphorus oxides
- Nitrogen oxides (NO_x)

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

- Remove persons to safety.
- Use personal protection equipment.
- Avoid contact with skin, eyes and clothes.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Provide adequate ventilation.
- Handle all blood and materials in contact with blood as if capable of transmitting infectious agents. It is recommended that blood and materials in contact with blood be handled using established good laboratory practices.

6.2 - Methods and material for containment and cleaning up

Methods and material for containment - Soak up inert absorbent and dispose as waste requiring special attention.

Methods and material for cleaning up

- Small amounts of spillages:
 - Wipe up with absorbent material (eg. cloth, fleece).
 - Collect in closed and suitable containers for disposal.
- Large amounts of spillages:
 - Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
 - Collect in closed and suitable containers for disposal.
 - Clear contaminated areas thoroughly.
 - Clean with disinfectants.
 - Sodium azide has been reported to form lead or copper azides in laboratory plumbing. These azides are potentially explosive. To prevent build up, flush plumbing with a large volume of water while disposing of these solutions in the sink.
- Select a disinfectant that is effective against bloodborne infectious agents.
- Commercial disinfectants must be used according to manufacturer directions. Disinfectants are typically hazardous chemicals that react with many chemicals, materials and living tissues. Obtain and review the manufacturer's safety information before using the disinfectant. This product contains sodium azide, which reacts with acid to liberate hydrazoic acid, a very toxic gas. Select a disinfectant with the following properties if disinfection of materials used to absorb a large volume of spilled product is required:

Concentrated Wash Solution

- Do not use any chemical or product with a pH below 6 to disinfect waste that contains sodium azide. Hydrazoic acid, a toxic gas, will be released when the pH is lower than 6.
- Do not use any chemical or product that contains mercury or any other metal to disinfect waste that contains sodium azide. This will create metal azide compounds, which can be highly explosive under pressure or shock (percussion).
- Select a disinfectant that does not bubble, effervesce or otherwise generate aerosols.
- Do not use excess disinfectant.
- Failure to follow manufacturer's directions may lead to unexpected reactions with the waste.
- Do not use a disinfectant if you do not have the proper facility, equipment and other appropriate protective measures available to work with it safely.

Inappropriate techniques

- No information available.

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation

- After use replace the closing cap immediately.
- All work processes must always be designed so that the following is excluded:
Skin contact
- Avoid exposure - obtain special instructions before use.
- Handle as a potentially infectious material.

Advices on general occupational hygiene

- Avoid contact with skin, eyes and clothes.
- Immediately remove any contaminated clothing, shoes or stockings.
- Wash contaminated clothing prior to re-use.
- Used working clothes should not be worn outside the work area.
- Thorough skin-cleansing after handling the product.
- Wash hands before breaks and after work.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Work in well-ventilated zones or use proper respiratory protection.
- When using do not eat, drink, smoke, sniff.

7.2 - Conditions for safe storage, including any incompatibilities

- Storage class Combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects (liquid)
- Keep container tightly closed in a cool, well-ventilated place.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Avoid high temperatures or direct sunlight.
- exposure to cold. Do not freeze
- Keep away from: Oxidising agent
- Do not mix with acids.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

Concentrated Wash Solution

sodium azide (26628-22-8)

| | |
|--------------------------------------|--|
| ACGIH Ceiling ppm (US) | 0.11 ppm as hydrazoic acid vapor A4 A4 = Not Classifiable as a Human Carcinogen. Skin |
| ACGIH Ceiling mg/m ³ (US) | 0.29 mg/m ³ as hydrazoic acid vapor A4 A4 = Not Classifiable as a Human Carcinogen. Skin |

- Skin =
- H: skin resorptive
- May be absorbed through the skin.

8.2 - Exposure controls

Appropriate engineering controls

- Provide adequate ventilation as well as local exhaust at critical locations.

Individual protection measures, such as personal protective equipment

- Tested protective gloves must be worn



- When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
- For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- Breakthrough times and swelling properties of the material must be taken into consideration.

- Suitable material: NBR (Nitrile rubber)

- Avoid contact with eyes.
- Suitable eye protection:

- Eye glasses
- Suitable protective clothing: Protective apron



- Barrier creams are not substitutes for body protection.
- After contact with skin, wash immediately with plenty of water and soap.
- Do not eat, drink or smoke when using this product.
- Make available sufficient washing facilities
- Provide eye shower and label its location conspicuously

Concentrated Wash Solution

- Take off contaminated clothing and wash it before reuse.
- Wash hands before breaks and after work.
- In case of inadequate ventilation wear respiratory protection.
- Respiratory protection necessary at: exceeding exposure limit values

SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

| <u>Physical state</u> <u>Colour</u> | Liquid colourless | <u>Appearance</u> <u>Odour</u> | Liquid odourless |
|--|----------------------|-----------------------------------|---------------------|
| Odour threshold | | No data available | |
| pH | | 6.5 - 6.6 | |
| Melting point | | No data available | |
| Freezing point | | No data available | |
| Boiling point | | No data available | |
| Flash point | | not applicable | |
| Evaporation rate | | No data available | |
| flammability | | not applicable | |
| Lower explosion limit | | not applicable | |
| Upper explosion limit | | not applicable | |
| Vapour pressure | | No data available | |
| Vapour density | | No data available | |
| Relative density | | No data available | |
| Density | | No data available | |
| Solubility (Water) | | No data available | |
| Solubility (Ethanol) | | No data available | |
| Solubility (Acetone) | | No data available | |
| Solubility (Organic solvents) | | No data available | |
| Log KOC | | No data available | |
| Auto-ignition temperature | | not applicable | |
| Decomposition temperature | | No data available | |
| Kinematic viscosity | | No data available | |
| Dynamic viscosity | | No data available | |

Particle characteristics

| | |
|-----------------------|-------------------|
| Particle size | not applicable |
| Dustiness | No data available |
| Specific surface area | No data available |
| Shape | No data available |

9.2 - Other information

| | |
|-------------|-------------------|
| VOC content | No data available |
|-------------|-------------------|

Concentrated Wash Solution

| | |
|---|-------------------|
| Minimum ignition energy | No data available |
| Conductivity | No data available |
| VOC Composite Partial Pressure (Calculated @ 20°C/68°F) | No data available |
| C.A.R.B. V.O.C. | No data available |
| % Photo Chemically Reactive | No data available |

- Not oxidising.
- not explosive according to EU A.14
- Data obtained by expert judgement.
- Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

- The product is chemically stable under recommended conditions of storage, use and temperature.

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.
- Contact with acids liberates very toxic gas.
- May form highly explosive metal azides if it reacts with lead, copper, silver or brass.

10.4 - Conditions to avoid

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Avoid high temperatures or direct sunlight.

10.5 - Incompatible materials

- Oxidising agent, strong
- Strong acid
- Strong alkali
- metals
- Copper
- Lead
- silver
- Brass

10.6 - Hazardous decomposition products

- Does not decompose when used for intended uses.
- Thermal decomposition can lead to the escape of irritating gases and vapours.
- Carbon dioxide
- Carbon monoxide
- Metal oxide smoke, toxic
- Nitrogen oxides (NO_x)
- Phosphorus oxides (e.g. P₂O₅)

Concentrated Wash Solution

SECTION 11: Toxicological information

11.1 - Information on hazard classes

Acute toxicity - Acute toxicity (dermal) - Category 4 - Harmful in contact with skin

Toxicity : Mixture

| | |
|---------------------------------------|-------------------|
| LD50 oral (rat) | No data available |
| LD50 dermal (rat) | No data available |
| LD50 dermal (rabbit) | No data available |
| LC50 inhalation (rat) | No data available |
| LC50 inhalation dusts and mists (rat) | No data available |
| LC50 inhalation vapours (rat) | No data available |

- May be harmful if swallowed.
- Harmful in contact with skin.
- May be absorbed through the skin.
- Calculation method.

Toxicity : Substances

| | |
|---------------------------------------|------------|
| sodium azide (26628-22-8) | |
| LD50 oral (rat) | 27 mg/kg |
| LD50 dermal (rat) | 18 mg/kg |
| LC50 inhalation dusts and mists (rat) | 0.054 mg/l |

Skin corrosion/irritation - Not classified

- Causes mild skin irritation.
- Calculation method.

Serious eye damage/eye irritation - Not classified

- Based on available data, the classification criteria are not met.
- Calculation method.

Respiratory or skin sensitisation - Not classified

- Based on available data, the classification criteria are not met.
- Calculation method.

Germ cell mutagenicity - Not classified

- Based on available data, the classification criteria are not met.

Carcinogenicity - Not classified

- Based on available data, the classification criteria are not met.

Reproductive toxicity - Not classified

- Based on available data, the classification criteria are not met.

STOT-single exposure - STOT-single exposure - Category 1 - Causes damage to organs

- Causes damage to organs.

Concentrated Wash Solution

- Organs affected:
- brain
- central nervous system
- cardiovascular system
- gastrointestinal tract
- Calculation method.

STOT-repeated exposure

- STOT-repeated exposure - Category 2 - May cause damage to organs through prolonged or repeated exposure

- May cause damage to organs through prolonged or repeated exposure.
- Organs affected:
- brain
- cardiovascular system
- gastrointestinal tract
- central nervous system
- Calculation method.

Aspiration hazard

- Not classified

11.2 - Information on other hazards

- This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

| | |
|-----------------------------------|-------------------|
| EC50 48 hr crustacea | No data available |
| LC50 96 hr fish | No data available |
| ErC50 algae | No data available |
| ErC50 other aquatic plants | No data available |
| NOEC chronic fish | No data available |
| NOEC chronic crustacea | No data available |
| NOEC chronic algae | No data available |
| NOEC chronic other aquatic plants | No data available |

Toxicity : Substances

sodium azide (26628-22-8)

| | |
|-------------|---|
| ErC50 algae | 0.35 mg/l Pseudokirchneriella subcapitata |
|-------------|---|

- Harmful to aquatic life with long lasting effects.

12.2 - Persistence and degradability

| | |
|---------------------------------|-------------------|
| Biochemical oxygen demand (BOD) | No data available |
| Chemical oxygen demand (COD) | No data available |
| % of biodegradation in 28 days | No data available |

- No information available.

Concentrated Wash Solution

12.3 - Bioaccumulative potential

| | |
|-------------------------------|-------------------|
| Bioconcentration factor (BCF) | No data available |
| Log KOC | No data available |

- No information available.

12.4 - Mobility in soil

- No information available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

| | |
|---|---|
| <u>Waste treatment methods</u> | <ul style="list-style-type: none">- Dispose of waste according to applicable legislation.- Handle contaminated packages in the same way as the substance itself.- Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. |
| <u>Sewage disposal</u> | <ul style="list-style-type: none">- No information available. |
| <u>Special precautions for waste treatment</u> | <ul style="list-style-type: none">- This material and its container must be disposed of as hazardous waste.- Waste for disposal is to be classified and labelled.- The waste is to be kept separate from other types of waste until its disposal.- Consult the appropriate local waste disposal expert about waste disposal. |
| <u>Community or national or regional provisions</u> | <ul style="list-style-type: none">- The waste code has to be identified in agreement with the disposal company or the competent authority. |

SECTION 14: Transport information

14.1 - UN number or ID number

Not applicable

14.2 - UN proper shipping name

Not applicable

14.3 - Transport hazard class(es)

Not applicable

14.4 - Packing group

Not applicable

14.5 - Environmental hazards

Not applicable

14.6 - Special precautions for user

Not applicable

14.7 - Maritime transport in bulk according to IMO instruments

Not applicable

Concentrated Wash Solution

SECTION 15: Regulatory information

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

US federal regulation

VOC content No data available

Components not listed in TSCA None

Substances in TRI (Toxics Release Inventory) sodium azide (26628-22-8)

- DSL/NDSL

US State regulations

Substances California PL 65 None

Other regulations, restrictions and prohibition regulations

- Listed
- SARA Title III Section 302 Reportable quantities / Threshold planning quantities
- CERCLA RQ
- The Superfund Amendments and Reauthorization Act (SARA)
- EPCRA Section 304 (EHS) RQ
- EPCRA Section 313 Chemical List
- California Air Toxics "Hot Spots" (A-I)
- Director's List of Hazardous Substances (§339, Title 8, California Administrative Code)
- Minnesota OSHA's Employee Right to Know law (MERTKA)
- New Jersey Hazardous Substance List
- Pennsylvania Hazardous Substance List
- Rhode Island Hazardous Substance Right-to-Know Act

SODIUM AZIDE (TPQ 500 and RQ 1000) - 1%
disodium hydrogenorthophosphate (RQ 5000) - <1%

SECTION 16: Other information

SDS versions

| Version | Issue date | Author | Description of the amendments |
|---------|------------|--------------|-------------------------------|
| 0.3 | 01/31/2024 | J Waterfield | 1.3, 3. |
| 0.2 | 10/10/2023 | J Waterfield | 1.3 |
| 0.1 | 09/06/2023 | J Waterfield | 8.1 |
| 0 | 05/22/2023 | J Waterfield | |

Abbreviations and acronyms

- For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>
- Acute toxicity estimate (ATE)

Data sources:

Material Safety Data Sheet, Misc. manufacturers.

Concentrated Wash Solution

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.