1 Identification

- Product identifier
  - Product Name: Bismuth Internal Standard Stock Solution, Part Number 8500-6936
  - Part Number: 8500-6936
  - Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.
  - Application of the substance / the mixture
    - Analytical Chemistry
      - A 100mL Solution

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    - Agilent Technologies, Inc
    - 5301 Stevens Creek Blvd.
    - Santa Clara, CA 95051 USA
  - Information department: product safety department
  - Emergency telephone number:
    - Emergency Phone Number (24 hours)
      - CHEMTREC (800-424-9300)
    - Outside US: 703-527-3887

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS07
  - Skin Irrit. 2: H315 Causes skin irritation.
  - Eye Irrit. 2A: H319 Causes serious eye irritation.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  - Irritant
    - Irritating to eyes and skin.

- Information concerning particular hazards for human and environment:
  - The product has to be labeled due to the calculation procedure of international guidelines.

- Classification system:
  - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- Label elements
  - GHS label elements: The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms
  - GHS07

- Signal word: Warning
- Hazard statements
  - Causes skin irritation.
  - Causes serious eye irritation.
- Precautionary statements
  - Wear protective gloves.
  - 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.
  - Specific treatment (see on this label).
  - If skin irritation occurs: Get medical advice/attention.
  - If eye irritation persists: Get medical advice/attention.

(Contd. on page 2)
3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.
- Dangerous components:
  - 7697-37-2 nitric acid 2.0%
- Chemical identification of the substance/preparation
  - 7440-69-9 bismuth 0.001%
  - 7732-18-5 water, distilled, conductivity or of similar purity 97.999%

4 First-aid measures

- Description of first aid measures
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - 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.
- Information for 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.
- Special hazards arising from the substance or mixture: No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Ensure adequate ventilation.
- Reference to other sections
  - See Section 7 for information on safe handling.
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: No special measures required.

- Conditions for safe storage, including any incompatibilities

- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep receptacle tightly sealed.

- 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:

  7697-37-2 nitric acid
  - PEL Long-term value: 5 mg/m³, 2 ppm
  - REL Short-term value: 10 mg/m³, 4 ppm
    Long-term value: 5 mg/m³, 2 ppm
  - TLV Short-term value: 10 mg/m³, 4 ppm
    Long-term value: 5.2 mg/m³, 2 ppm

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

- 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 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.
    Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
    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.
9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:** Liquid
  - **Color:** Colorless
  - **Odor:** Odorless
  - **Odour Threshold:** Not applicable.
- **pH-value:** <1
- **Change in condition**
  - **Melting point/Melting range:** 0 °C (32°F)
  - **Boiling point/Boiling range:** 100 °C (212°F)
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:**
  - **Decomposition temperature:** Not applicable.
  - **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not applicable.
  - **Upper:** Not applicable.
- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)
- **Density**
  - **Relative density**
  - **Vapour density**
  - **Evaporation rate**
  - **Solubility in / Miscibility with Water:** Miscible
- **Partition coefficient (n-octanol/water):** Not applicable.
- **Viscosity:**
  - **Dynamic:** Not applicable.
  - **Kinematic:** Not applicable.
- **Solvent content:**
  - **Organic solvents:** 0.0 %
  - **Water:** 98.0 %
  - **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **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.

(Contd. of page 5)
### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
    - **Primary irritant effect:**
      - on the skin: Irritant to skin and mucous membranes.
      - 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:
      - Irritant

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    - None of the ingredients is listed.
  - **NTP (National Toxicology Program)**
    - None of the ingredients is listed.
  - **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: No further relevant information available.
  - Mobility in soil: No further relevant information available.
  - Additional ecological information:
    - General notes:
      - Water hazard class 1 (Self-assessment): slightly hazardous for water
      - Results of PBT and vPvB assessment:
        - PBT: Not applicable.
        - vPvB: Not applicable.
      - Other adverse effects: No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
  - **Uncleaned packagings:**
    - Recommendation: Disposal must be made according to official regulations.

### 14 Transport information

- **UN-Number**
  - DOT, ADR, IMDG, IATA: UN3264
- **UN proper shipping name**
  - DOT: Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid solution)
  - ADR: 3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid solution)
Product Name: Bismuth Internal Standard Stock Solution, Part Number 8500-6936

15 Regulatory information

- SARA
  - Section 355 (extremely hazardous substances):
    - 7697-37-2 nitric acid
  - Section 313 (Specific toxic chemical listings):
    - 7697-37-2 nitric acid
- TSCA (Toxic Substances Control Act):
  - All ingredients are listed.
- 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.

- Carcinogenic categories
  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    None of the ingredients is listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.

- GHS label elements
  The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms
  ! WARNING
  GHS07

- Signal word Warning

- Hazard statements
  Causes skin irritation.
  Causes serious eye irritation.

- Precautionary statements
  Wear protective gloves.
  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.
  Specific treatment (see on this label).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.

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

16 Other information

Disclaimer: The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Department issuing SDS: product safety department
- Contact:
  Agilent Technologies, Inc.
  800-227-9770
- Date of preparation / last revision 05/13/2015 / -
- 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)
  Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A