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

- 1.1 Product identifier
- Trade name: Buffer solution pH4.01(+/-0.02), red/pink
- Article number: K1520BC, 79901754

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

- Application of the substance / the mixture Laboratory use

- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
  Yokogawa Process Analyzers Europe B.V.
  Euroweg 2
  3825 HD Amersfoort
  The Netherlands
  Phone: +31 (0)88-464 1000
  Fax: +31 (0)88-464111
  visit us at: www.yokogawa.com/eu

- Further information obtainable from: Product safety department
- 1.4 Emergency telephone number: Yokogawa, Phone : +31 (0)88-4641000

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008
  The product is not classified according to the CLP regulation.

- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008 Void
  - Hazard pictograms Void
  - Signal word Void
  - Hazard statements Void

- 2.3 Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- 3.1 Substances
- CAS No. Description
  7732-18-5 water, distilled, conductivity or of similar purity
- Identification number(s)
- EC number: 231-791-2

- 3.2 Mixtures
- Description: Mixture of substances listed below with nonhazardous additions.

- Dangerous components: Void
- Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

- 4.1 Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.

- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
41.1.9

- 4.3 Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
  - Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- 5.2 Special hazards arising from the substance or mixture
  No further relevant information available.
- 5.3 Advice for firefighters
  - Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
  Not required.
- 6.2 Environmental precautions: Dilute with plenty of water.
- 6.3 Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- 6.4 Reference to other sections
  No further relevant information available.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  No special measures required.
- Information about fire - and explosion protection: No special measures required.
- 7.2 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: None.
- 7.3 Specific end use(s)
  No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities: No further data; see item 7.
- 8.1 Control parameters
- Ingredients with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information: The lists valid during the making were used as basis.
- 8.2 Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals.
  - Respiratory protection: Use suitable respiratory protective device only when aerosol or mist is formed.
  - Protection of hands: 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
    Nitrile rubber

(Contd. on page 3)
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

- **Appearance:** Fluid
- **Colour:** Light red
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **pH-value at 20 °C:** 4
- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:**
  - **Decomposition temperature:** Not determined.
- **Self-igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapour pressure at 20 °C:** 23 hPa
- **Density at 20 °C:** 1.01 g/cm³
- **Relative density**
- **Vapour density**
- **Evaporation rate**
- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic:** Not determined.
  - **Kinematic:** Not determined.
- **Solvent content:**
  - **Organic solvents:** 0.0 %
  - **Water:** 99.0 %
  - **Solids content:** 1.0 %
- **9.2 Other information**
  - No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known.

10.4 Conditions to avoid

No further relevant information available.
Trade name: Buffer solution pH 4.01 (+/-0.02), red/pink

- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

**SECTION 11: Toxicological information**

- 11.1 Information on toxicological effects
  - Acute toxicity
  - Primary irritant effect:
    - Skin corrosion/irritation Based on available data, the classification criteria are not met.
    - Serious eye damage/irritation Based on available data, the classification criteria are not met.
  - Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
    - Germ cell mutagenicity Based on available data, the classification criteria are not met.
    - Carcinogenicity Based on available data, the classification criteria are not met.
    - Reproductive toxicity Based on available data, the classification criteria are not met.
    - STOT-single exposure Based on available data, the classification criteria are not met.
    - STOT-repeated exposure Based on available data, the classification criteria are not met.
    - Aspiration hazard Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**

- 12.1 Toxicity
  - Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
  - General notes: Generally not hazardous for water
- 12.5 Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

**SECTION 13: Disposal considerations**

- 13.1 Waste treatment methods
  - Recommendation Smaller quantities can be disposed of with household waste.
  - Uncleaned packaging: Disposal must be made according to official regulations.
  - Recommended cleansing agents: Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**

- 14.1 UN-Number Void
- 14.2 UN proper shipping name Void
- 14.3 Transport hazard class(es) Void
- 14.4 Packing group Void
- 14.5 Environmental hazards:
  - Marine pollutant: No
  - Special precautions for user Not applicable.
Trade name: Buffer solution pH4.01(+-0.02), red/pink

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
  Not applicable.
- UN "Model Regulation":
  Void

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
    - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Contact: Product safety department
- Abbreviations and acronyms:
  RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
  ICAO: International Civil Aviation Organisation
  ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
  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
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  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)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative

- * Data compared to the previous version altered.