

Date: 14.02.2011

Former date: --

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name
KaryoLite BoBs (RUO)
Company product code
4501-0010 (packages P1 and P2)
Reach registration number
N/A

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

The uses of the chemical
KaryoLite BoBs is intended only for research use for the detection of abnormalities of DNA.
The chemical can be used by the general public
The chemical is used by the general public only

1.3 Details of the supplier of the safety data sheet

Manufacturer, importer, other undertaking
PerkinElmer, Wallac Oy
Street address Mustionkatu 6
Postcode and post office FIN-20750 Turku
Post-office box PO Box 10
Postcode and post office FIN-20101 Turku
Telephone number +358-2-2678 111
Telefax +358-2-2678 357
E-mail address www.perkinelmer.com
Finnish Business ID (Y code) 0937168-4

1.4 Emergency telephone number SAFETY: +1-800-424-9300 (US)
+358-9-471 977
USE: +32-2-717-7924

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Hybridization buffer and Wash Buffer 1 may cause harm to (or damage) the unborn child, see enclosed MSDS
Avoid exposure - obtain special instructions before use. Restricted to professional users.

2.2 Label elements



Danger

2.3 Other hazards
N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

CAS/EC number and the registration number	Name of the ingredient	Concentration	Classification
75-12-7	Formamide	See 3.1.2	T, R 61, Repr. Cat. 2 GHS: Repr 1B, H360D, GHS08 Dgr

The product contains following components and hazardous chemicals as ingredients:

- Wash Buffer 1 ([75-12-7] Formamide 50%)
- Hybridization Buffer ([75-12-7] Formamide 50%)

Note! These solutions may cause harm to (or damage) the unborn child, see enclosed MSDS

Trade name: KaryoLite BoBs (RUO)

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- Random Primer Solution
- Biotin-dNTP Mix
- Polymerase
- Sample Diluent
- KaryoLite BoBs Mix
- Reporter Concentrate
- Reporter Diluent
- Wash Buffer 2

The concentrations of hazardous chemicals in these other components are so low that the reagents are not classified as hazardous material

SECTION 4: FIRST AID MEASURES

- 4.1 Description of first aid measures**
Wash with plenty of water.
- 4.2 Most important symptoms and effects, both acute and delayed**
See enclosed MSDS for Wash Buffer 1 and Hybridization Buffer
- 4.3 Indication of any immediate medical attention and special treatment needed**
If irritation occurs or if feeling unwell, seek medical advice

SECTION 5: FIREFIGHTING MEASURES

- 5.1 Extinguishing media**
Water, appropriate foam, dry chemical or carbon dioxide
- 5.2 Special hazards arising from the substance or mixture**
Emits toxic fumes and nitrogen oxides
- 5.3 Advice for firefighters**
N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**
Wear suitable protective clothes. Avoid contact, do not inhale vapours/aerosols.
- 6.2 Environmental precautions**
See enclosed MSDS for Wash Buffer 1 and Hybridization Buffer
- 6.3 Methods and material for containment and cleaning up**
Absorb on sand, paper, vermiculite or other appropriate material and place in a closed container for disposal. Ventilate and wash the area with water and detergent.
- 6.4 Reference to other sections**
N/A

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**
Wear suitable protective clothes and gloves.
- 7.2 Conditions for safe storage, including any incompatibilities**
Store package P1 at -30...-16°C and package P2 at +2...+8°C. The expiry date of the complete packages are stated on the outer labels!
- 7.3 Specific end use(s)**
For Research Use Only. Not for use in diagnostic procedures.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters**
- National occupational exposure limit values**
see enclosed MSDS for Hybridization Buffer and Wash Buffer 1
- Other limit values**
see enclosed MSDS for Hybridization Buffer and Wash Buffer 1
- DNEL**
N/A
- PNEC**
N/A

8.2 Exposure controls

- Appropriate engineering controls**
Use good laboratory practices
- Eye/face protection**
At source of great extent of splashing use safety goggles

Trade name: KaryoLite BoBs (RUO)

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Skin protection

Workwear

Hand protection

Disposable gloves. see enclosed MSDS for Hybridization Buffer and Wash Buffer 1

Respiratory protection

Not needed in laboratory scale. Filter A, if needed.

Thermal hazards

N/A

Environmental exposure controls

see enclosed MSDS for Hybridization Buffer and Wash Buffer 1

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Small vials, liquids.
Odour	N/A
Odour threshold	N/A
pH	N/A
Melting point/freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	N/A
Evaporation rate	N/A
Flammability (solid, gas)	N/A
Upper/lower flammability or explosive limits	N/A
Vapour pressure	N/A
Vapour density	N/A
Relative density	N/A
Solubility(ies)	Water
Partition coefficient: n-octanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A
Explosive properties	N/A
Oxidising properties	N/A

9.2 Other information

N/A

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

N/A

10.2 Chemical stability

N/A

10.3 Possibility of hazardous reactions

N/A

10.4 Conditions to avoid

N/A

10.5 Incompatible materials

N/A

10.6 Hazardous decomposition products

N/A

Trade name: KaryoLite BoBs (RUO)

Date: 14.02.2011

Former date: --

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

see enclosed MSDS for Hybridization Buffer and Wash Buffer 1. The product is not fully tested

Skin corrosion/irritation

The components of this kit may irritate very sensitive persons

Serious eye damage/irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

see enclosed MSDS for Hybridization Buffer and Wash Buffer 1

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration hazard

No data available

Other information

May cause congenital malformations in the foetus. The components of this kit may irritate very sensitive persons

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

see enclosed MSDS for Hybridization Buffer and Wash Buffer 1

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

The product is not fully tested

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal of all waste should be in accordance with local regulations. Hybridization Buffer and Wash Buffer 1 are classified as hazardous waste .

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

This product is not regulated under the transport regulations

14.2 UN proper shipping name

N/A

14.3 Transport hazard class(es)

N/A

14.4 Packing group

N/A

14.5 Environmental hazards

Trade name: KaryoLite BoBs (RUO)

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- N/A
- 14.6 Special precautions for user**
N/A
- 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
N/A

SECTION 15: REGULATORY INFORMATION

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
For reseach use only. Not for use in diagnostic procedures. Hybridization Buffer and Wash Buffer 1 are restricted to professional users.
- 15.2 Chemical safety assessment**
N/A

SECTION 16: OTHER INFORMATION

See instructions for use. This product should only be used by adequately trained personnel

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Wallac shall not be held liable for any damage resulting from handling or from contact with the above

SAFETY DATA SHEET

Date: 14.02.2011

Former date: --

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier****Trade name**

Hybridization Buffer and Wash Buffer 1 (Components of KaryoLite BoBs kit)

Company product code

N/A

Reach registration number

N/A

1.2 Relevant identified uses of the substance or mixture and uses advised against**The uses of the chemical**

Components of a BoBs kit.

The chemical can be used by the general public **The chemical is used by the general public only** **1.3 Details of the supplier of the safety data sheet****Manufacturer, importer, other undertaking**

PerkinElmer, Wallac Oy

Street address

Mustionkatu 6

Postcode and post office

FIN-20750 Turku

Post-office box

PO Box 10

Postcode and post office

FIN-20101 Turku

Telephone number

+358-2-2678 111

Telefax

+358-2-2678 357

E-mail address

www.perkinelmer.com

Finnish Business ID (Y code)

0937168-4

1.4 Emergency telephone number

SAFETY: +1-800-424-9300 (US)

+358-9-471 977

USE: +32-2-717-7924

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

These solutions (Hybridization Buffer and Wash Buffer 1) may cause harm to (or damage) the unborn child.

Avoid exposure - obtain special instructions before use.

Restricted to professional users.

2.2 Label elements**Danger****2.3 Other hazards**

N/A

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**Hazardous ingredients**

CAS/EC number and the registration number	Name of the ingredient	Concentration	Classification
75-12-7	Formamide	40-60%	T, R 61, Repr. Cat. 2 GHS: Repr 1B, H360D, GHS08 Dgr

Other information

The solutions contain also other chemicals not classified as hazardous

Trade name: Hybridization Buffer and Wash Buffer 1

Date: 14.02.2011

Former date: --

SECTION 4: FIRST AID MEASURES

- 4.1 Description of first aid measures**
Wash with plenty of water. If inhaled, remove to fresh air.
- 4.2 Most important symptoms and effects, both acute and delayed**
May irritate and may cause harm to (or damage) the unborn child.
- 4.3 Indication of any immediate medical attention and special treatment needed**
If irritation occurs or if feeling unwell or if you are pregnant, seek medical advice

SECTION 5: FIREFIGHTING MEASURES

- 5.1 Extinguishing media**
Water, appropriate foam, dry chemical or carbon dioxide
- 5.2 Special hazards arising from the substance or mixture**
Emits toxic fumes and nitrogen oxides
- 5.3 Advice for firefighters**
N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**
Wear suitable protective clothes. Avoid contact, do not inhale vapours/aerosols.
- 6.2 Environmental precautions**
Do not allow run off to sewer, waterway or ground
- 6.3 Methods and material for containment and cleaning up**
Absorb on sand, paper, vermiculite or other appropriate material and place in a closed container for disposal. Ventilate and wash the area with water and detergent.
- 6.4 Reference to other sections**
N/A

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling**
Wear suitable protective clothes, gloves and at source of great extent of splashing use safety goggles. Restricted to professional users.
- 7.2 Conditions for safe storage, including any incompatibilities**
Store at temperature specified on package. The expiry dates of the complete packages are stated on the outer labels. Accessible only for authorized persons
- 7.3 Specific end use(s)**
For research use only.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.2 Control parameters

National occupational exposure limit values
10ppm (8h), 20ppm (15min), (2009) skin (formamide)

Other limit values
10ppm (8h), 20ppm (15min), (2009) skin (formamide)

DNEL
N/A

PNEC
N/A

8.2 Exposure controls

Appropriate engineering controls
Use good laboratory practices

Eye/face protection
At source of great extent of splashing use safety goggles

Skin protection
Workwear

Hand protection
Disposable gloves, latex or nitrile

Respiratory protection
Not needed in laboratory scale. Filter A, if needed.

Thermal hazards
N/A

Environmental exposure controls
Do not allow run off to sewer, waterway or ground

Trade name: Hybridization Buffer and Wash Buffer 1

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.3 Information on basic physical and chemical properties

Appearance	Small vials, colourless liquids.
Odour	Slight odour of ammonia.
Odour threshold	N/A
pH	4-5
Melting point/freezing point	N/A
Initial boiling point and boiling range	N/A
Flash point	175°C (oc., formamide)
Evaporation rate	Henry's Law constant: $H = 1.21 \times 10^{-9}$ atm m ³ /mol (formamide)
Flammability (solid, gas)	N/A
Upper/lower flammability or explosive limits	2,7 - 19,0 % (formamide)
Vapour pressure	0,08 hPa (formamide)
Vapour density	1,56 (formamide)
Relative density	ca. 1 g/cm ³
Solubility(ies)	Water
Partition coefficient: n-octanol/water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Viscosity	N/A
Explosive properties	N/A
Oxidising properties	N/A

9.4 Other information
N/A

SECTION 10: STABILITY AND REACTIVITY

- 10.1 **Reactivity**
N/A
- 10.2 **Chemical stability**
N/A
- 10.3 **Possibility of hazardous reactions**
N/A
- 10.4 **Conditions to avoid**
N/A
- 10.5 **Incompatible materials**
Iodine, pyridine, sulphur trioxide, oxidizing agents
- 10.6 **Hazardous decomposition products**
Carbon and nitrogen oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 6000 mg/kg (rat, oral) (formamide)

LD50 3500 mg/kg (mouse, oral) (formamide)

The product is not fully tested

Trade name: Hybridization Buffer and Wash Buffer 1

Date: 14.02.2011

Former date: --

Skin corrosion/irritation

The solutions may irritate very sensitive persons

Serious eye damage/irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

May cause congenital malformations in the foetus

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration hazard

No data available

Other information

May cause congenital malformations in the foetus. The solutions may irritate very sensitive persons

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

LC₅₀ = 4600 – 9300 mg/l/96h (L.idus, DIN 38412) (formamide)

EC₅₀ = >500 mg/l/48h (Daphnia) (formamide)

IC₅₀ = >500 mg/l/72h (Algae) (formamide)

EC₅₀ = >10 g/l/17h (Pseudomonas putida) (formamide)

12.2 Persistence and degradability

>30%/14d (MITI test) (formamide)

>70%/28d (OECD 302B) (formamide)

12.3 Bioaccumulative potential

no bioaccumulation, log Pow -0.82 (OECD 107) (formamide)

12.4 Mobility in soil

No data available mobile, log Koc 1.101(IUCLID) (formamide)

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

The product is not fully tested

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal of all waste should be in accordance with local regulations. The solutions are classified as hazardous waste .

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

This product is not regulated under the transport regulations

14.2 UN proper shipping name

N/A

14.3 Transport hazard class(es)

N/A

14.4 Packing group

N/A

14.5 Environmental hazards

N/A

14.6 Special precautions for user

N/A

Trade name: Hybridization Buffer and Wash Buffer 1

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14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
N/A

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Only for research use. The solutions are restricted to professional users.

15.2 Chemical safety assessment
N/A

SECTION 16: OTHER INFORMATION

See instructions for use. This product should only be used by adequately trained personnel

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Wallac shall not be held liable for any damage resulting from handling or from contact with the above