SAFETY DATA SHEET

Section 1. Identification

GHS product identifier : SensationPlus FFPE Amplification Kit

Product code : 902037

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

Not applicable.

Supplier/Manufacturer : Affymetrix, Inc.
3420 Central Expressway
Santa Clara, CA 95051
Phone: 1-408-731-5000
website: www.affymetrix.com

Emergency telephone number : **Chemtrec: +1 703 527 3887**

Section 2. Hazards identification

Classification of the substance or mixture :

SensationPlus FFPE Amplification Module	SKIN CORROSION/IRRITATION - Category 3 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
RNA Purification Beads Amplification	Not classified.

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.4%

GHS label elements

Hazard pictograms :

Signal word :

SensationPlus FFPE Amplification Module	Warning
RNA Purification Beads Amplification	No signal word.

Hazard statements :

SensationPlus FFPE Amplification Module	Causes mild skin irritation. Causes eye irritation.
RNA Purification Beads Amplification	No known significant effects or critical hazards.

Precautionary statements

General :

SensationPlus FFPE Amplification Module	Not applicable.
RNA Purification Beads Amplification	Not applicable.

Prevention :

SensationPlus FFPE Amplification Module	Wear eye or face protection. Wash hands thoroughly after handling.
RNA Purification Beads Amplification	Not applicable.

Response :

SensationPlus FFPE Amplification Module	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
RNA Purification Beads Amplification	Not applicable.

Section 2. Hazards identification

Storage	:	SensationPlus FFPE Amplification Module	Not applicable.
		RNA Purification Beads Amplification	Not applicable.
Disposal	:	SensationPlus FFPE Amplification Module	Not applicable.
		RNA Purification Beads Amplification	Not applicable.

Other hazards which do not result in classification : Not available.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
SensationPlus FFPE Amplification Module		
SensationPlus Promoter Synthesis and IVT Reagents		
Tailing Buffer Mix		
Tris Hydrochloride	1.6	1185-53-1
Promoter Synthesis Buffer Mix		
Tris Hydrochloride	1.6	1185-53-1
Promoter Synthesis Enzyme Mix		
glycerol	50	56-81-5
T7 Buffer Mix		
Tris Hydrochloride	6.3	1185-53-1
(R*,R*)-1,4-dimercaptobutane-2,3-diol	1.5	3483-12-3
T7 Enzyme Mix		
glycerol	50	56-81-5
SensationPlus First Strand cDNA Synthesis Reagents		
RNase Inhibitor		
glycerol	50	56-81-5
RT Buffer Mix		
Tris Hydrochloride	3.9	1185-53-1
potassium chloride	2.8	7447-40-7
RT Enzyme Mix		
glycerol	50	56-81-5
DTT		
(R*,R*)-1,4-dimercaptobutane-2,3-diol	1.5	3483-12-3
RNA Purification Beads Amplification		
RNA Purification Beads Amp		
sodium azide	0.09 - 0.1	26628-22-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	:	SensationPlus FFPE Amplification Module	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention.
		RNA Purification Beads Amplification	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	SensationPlus FFPE Amplification Module	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		RNA Purification Beads Amplification	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	SensationPlus FFPE Amplification Module	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if adverse health effects persist or are severe. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		RNA Purification Beads Amplification	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	SensationPlus FFPE Amplification Module	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
		RNA Purification Beads Amplification	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Section 4. First aid measures

Eye contact	:	SensationPlus FFPE Amplification Module	Causes eye irritation.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Inhalation	:	SensationPlus FFPE Amplification Module	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Skin contact	:	SensationPlus FFPE Amplification Module	Causes mild skin irritation.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Ingestion	:	SensationPlus FFPE Amplification Module	Irritating to mouth, throat and stomach.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	SensationPlus FFPE Amplification Module	Adverse symptoms may include the following: pain or irritation watering redness
		RNA Purification Beads Amplification	No specific data.
Inhalation	:	SensationPlus FFPE Amplification Module	No specific data.
		RNA Purification Beads Amplification	No specific data.
Skin contact	:	SensationPlus FFPE Amplification Module	Adverse symptoms may include the following: irritation redness
		RNA Purification Beads Amplification	No specific data.
Ingestion	:	SensationPlus FFPE Amplification Module	No specific data.
		RNA Purification Beads Amplification	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	:	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.	
Specific treatments	:	SensationPlus FFPE Amplification Module	No specific treatment.
		RNA Purification Beads Amplification	No specific treatment.
Protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.	

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	SensationPlus FFPE Amplification Module	Use an extinguishing agent suitable for the surrounding fire.
		RNA Purification Beads Amplification	Use an extinguishing agent suitable for the surrounding fire.

Section 5. Fire-fighting measures

Unsuitable extinguishing media	:	SensationPlus FFPE Amplification Module	None known.
		RNA Purification Beads Amplification	None known.
Specific hazards arising from the chemical	:	SensationPlus FFPE Amplification Module	In a fire or if heated, a pressure increase will occur and the container may burst.
		RNA Purification Beads Amplification	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	:	SensationPlus FFPE Amplification Module	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
		RNA Purification Beads Amplification	No specific data.
Special protective actions for fire-fighters	:	SensationPlus FFPE Amplification Module	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
		RNA Purification Beads Amplification	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	SensationPlus FFPE Amplification Module	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		RNA Purification Beads Amplification	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling :

SensationPlus FFPE Amplification Module	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
RNA Purification Beads Amplification	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
SensationPlus FFPE Amplification Module **SensationPlus Promoter Synthesis and IVT Reagents** **Promoter Synthesis Enzyme Mix**	
glycerol	**ACGIH TLV (United States, 2/2010).** TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction
T7 Enzyme Mix	
glycerol	**ACGIH TLV (United States, 2/2010).** TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction
SensationPlus First Strand cDNA Synthesis Reagents **RNase Inhibitor**	
glycerol	**ACGIH TLV (United States, 2/2010).**

Section 8. Exposure controls/personal protection

	TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction
RT Enzyme Mix glycerol	**ACGIH TLV (United States, 2/2010).** TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction
RNA Purification Beads Amplification **RNA Purification Beads Amp** sodium azide	**ACGIH TLV (United States, 2/2010).** C: 0.11 ppm, (as hydrazoic acid vapor) Form: as Hydrazoic acid vapor C: 0.29 mg/m³, (as Sodium azide) Form: as Sodium azide

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Thermal hazards : Not applicable.

Section 9. Physical and chemical properties

Appearance

Physical state	:	SensationPlus FFPE Amplification Module	Liquid.
		RNA Purification Beads Amplification	Liquid.
Color	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Odor	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Odor threshold	:	Not available.	
pH	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Melting point	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Boiling point	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Flash point	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Burning time	:	SensationPlus FFPE Amplification Module	Not applicable.
		RNA Purification Beads Amplification	Not applicable.
Burning rate	:	Not applicable.	
Evaporation rate	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Flammability (solid, gas)	:	Not available.	
Lower and upper explosive (flammable) limits	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Vapor pressure	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Vapor density	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Relative density	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.

Section 9. Physical and chemical properties

Solubility	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Partition coefficient: n-octanol/water	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Auto-ignition temperature	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Decomposition temperature	:	Not available.	
Viscosity	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.

Section 10. Stability and reactivity

Reactivity	:	SensationPlus FFPE Amplification Module	No specific test data related to reactivity available for this product or its ingredients.
		RNA Purification Beads Amplification	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	SensationPlus FFPE Amplification Module	The product is stable.
		RNA Purification Beads Amplification	The product is stable.
Possibility of hazardous reactions	:	SensationPlus FFPE Amplification Module	Under normal conditions of storage and use, hazardous reactions will not occur.
		RNA Purification Beads Amplification	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	SensationPlus FFPE Amplification Module	No specific data.
		RNA Purification Beads Amplification	No specific data.
Incompatible materials	:	SensationPlus FFPE Amplification Module	No specific data.
		RNA Purification Beads Amplification	No specific data.
Hazardous decomposition products	:	SensationPlus FFPE Amplification Module	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		RNA Purification Beads Amplification	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
SensationPlus FFPE Amplification Module				
SensationPlus Promoter Synthesis and IVT Reagents				
Promoter Synthesis Enzyme Mix				
glycerol	LD50 Oral	Rat	12600 mg/kg	-
T7 Enzyme Mix				
glycerol	LD50 Oral	Rat	12600 mg/kg	-
SensationPlus First Strand cDNA Synthesis Reagents				
RNase Inhibitor				
glycerol	LD50 Oral	Rat	12600 mg/kg	-
RT Buffer Mix				
potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
RT Enzyme Mix				
glycerol	LD50 Oral	Rat	12600 mg/kg	-
RNA Purification Beads Amplification				
RNA Purification Beads Amp				
sodium azide	LD50 Dermal	Rabbit	20 mg/kg	-
	LD50 Dermal	Rat	50 mg/kg	-
	LD50 Oral	Rat	27 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
SensationPlus FFPE Amplification Module					
SensationPlus Promoter Synthesis and IVT Reagents					
Promoter Synthesis Enzyme Mix					
glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
T7 Enzyme Mix					
glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
SensationPlus First Strand cDNA Synthesis Reagents					
RNase Inhibitor					
glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Section 11. Toxicological information

RT Buffer Mix					
potassium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
RT Enzyme Mix					
glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
SensationPlus FFPE Amplification Module			
SensationPlus Promoter Synthesis and IVT Reagents			
Tailing Buffer Mix			
Tris Hydrochloride	Category 3	Inhalation	Respiratory tract irritation
Promoter Synthesis Buffer Mix			
Tris Hydrochloride	Category 3	Inhalation	Respiratory tract irritation
T7 Buffer Mix			
Tris Hydrochloride	Category 3	Inhalation	Respiratory tract irritation
(R*,R*)-1,4-dimercaptobutane-2,3-diol	Category 3	Inhalation	Respiratory tract irritation
SensationPlus First Strand cDNA Synthesis Reagents			
RT Buffer Mix			
Tris Hydrochloride	Category 3	Inhalation	Respiratory tract irritation
DTT			
(R*,R*)-1,4-dimercaptobutane-2,3-diol	Category 3	Inhalation	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact	:	SensationPlus FFPE Amplification Module	Causes eye irritation.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Inhalation	:	SensationPlus FFPE Amplification Module	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Skin contact	:	SensationPlus FFPE Amplification Module	Causes mild skin irritation.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Ingestion	:	SensationPlus FFPE Amplification Module	Irritating to mouth, throat and stomach.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	SensationPlus FFPE Amplification Module	Adverse symptoms may include the following: pain or irritation watering redness
		RNA Purification Beads Amplification	No specific data.
Inhalation	:	SensationPlus FFPE Amplification Module	No specific data.
		RNA Purification Beads Amplification	No specific data.
Skin contact	:	SensationPlus FFPE Amplification Module	Adverse symptoms may include the following: irritation redness
		RNA Purification Beads Amplification	No specific data.
Ingestion	:	SensationPlus FFPE Amplification Module	No specific data.
		RNA Purification Beads Amplification	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.
Potential delayed effects	:	SensationPlus FFPE Amplification Module	Not available.
		RNA Purification Beads Amplification	Not available.

Potential chronic health effects

Not available.

Section 11. Toxicological information

General	:	SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Carcinogenicity	:	SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Mutagenicity	:	SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Teratogenicity	:	SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Developmental effects	:	SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
Fertility effects	:	SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
SensationPlus FFPE Amplification Module	
SensationPlus Promoter Synthesis and IVT Reagents	
T7 Buffer Mix	
Oral	33333.3 mg/kg
SensationPlus First Strand cDNA Synthesis Reagents	
RT Buffer Mix	
Oral	92857.1 mg/kg
DTT	
Oral	33333.3 mg/kg

Other information :

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
SensationPlus FFPE Amplification Module			
SensationPlus Promoter Synthesis and IVT Reagents			
Promoter Synthesis Enzyme Mix			
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
T7 Buffer Mix			
(R*,R*)-1,4-	Acute LC50 27000 ug/L Fresh water	Daphnia - Daphnia magna - <24	48 hours

Section 12. Ecological information

dimercaptobutane-2,3-diol		hours	
T7 Enzyme Mix			
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
SensationPlus First Strand cDNA Synthesis Reagents			
RNase Inhibitor			
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
RT Buffer Mix			
potassium chloride	Acute EC50 1337000 ug/L Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 83000 ug/L Fresh water	Daphnia - Daphnia magna - 12 hours	48 hours
	Acute LC50 16.5 mg/L Fresh water	Crustaceans - Diaphanosoma brachyurum - Neonate - 24 hours	48 hours
	Acute LC50 435000 ug/L Fresh water	Fish - Gambusia affinis - Adult	96 hours
RT Enzyme Mix			
glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
DTT			
(R*,R*)-1,4-dimercaptobutane-2,3-diol	Acute LC50 27000 ug/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
RNA Purification Beads Amplification			
RNA Purification Beads Amp			
sodium azide	Acute EC50 0.348 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6.4 mg/L Fresh water	Crustaceans - Simocephalus serrulatus - Larvae	48 hours
	Acute EC50 4.2 mg/L Fresh water	Daphnia - Daphnia pulex - Larvae	48 hours
	Acute LC50 0.68 mg/L Fresh water	Fish - Lepomis macrochirus - 0.6 g	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
SensationPlus FFPE Amplification Module			
SensationPlus Promoter Synthesis and IVT Reagents			
Promoter Synthesis Enzyme Mix			
glycerol	-1.76	-	low
T7 Enzyme Mix			
glycerol	-1.76	-	low
SensationPlus First Strand			

Section 12. Ecological information

cDNA Synthesis Reagents **RNase Inhibitor** glycerol	-1.76	-	low
RT Enzyme Mix glycerol	-1.76	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : SensationPlus FFPE Amplification Module — Not available.

RNA Purification Beads Amplification — Not available.

Mobility : SensationPlus FFPE Amplification Module — Not available.

RNA Purification Beads Amplification — Not available.

Other adverse effects : SensationPlus FFPE Amplification Module — No known significant effects or critical hazards.

RNA Purification Beads Amplification — No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	UN	IMDG	IATA
UN number	Not available.	Not available.	Not available.
UN proper shipping name	Not available.	Not available.	Not available.
Transport hazard class(es)	Not available.	Not available.	Not available.
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Special precautions for user	Not available.	Not available.	Not available.

Section 14. Transport information

Additional information	-	-	-

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other information

History

Date of issue/Date of revision : 07/23/2012.

Date of previous issue : 07/20/2012.

Version : 1.01

Key to abbreviations : ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.