

SAFETY DATA SHEET

Section 1. Identification

GHS product identifier : SensationPlus WT FFPE Amplification and Labeling Kit
Product code : 902031

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.
SensationPlus FFPE Labeling Core Module ACUTE TOXICITY: ORAL - Category 3
ACUTE TOXICITY: INHALATION - Category 3
RESPIRATORY SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY: INHALATION - Category 1B
TOXIC TO REPRODUCTION [Fertility] - Category 1B
TOXIC TO REPRODUCTION [Unborn child] - Category 1B
AQUATIC TOXICITY (ACUTE) - Category 1
AQUATIC TOXICITY (CHRONIC) - Category 1
SensationPlus WT Labeling Module SKIN CORROSION/IRRITATION - Category 3
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1.1%

GHS label elements

Hazard pictograms :



Signal word :

SensationPlus FFPE Amplification Module Warning
RNA Purification Beads Amplification No signal word.
SensationPlus FFPE Labeling Core Module Danger
SensationPlus WT Labeling Module Warning

Section 2. Hazards identification

Hazard statements	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Causes mild skin irritation. Causes eye irritation. No known significant effects or critical hazards. Toxic if swallowed. Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer if inhaled. May damage fertility or the unborn child. Suspected of causing genetic defects. Very toxic to aquatic life with long lasting effects. Causes mild skin irritation. Causes eye irritation.
Precautionary statements		
General	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Not applicable. Not applicable. Not applicable. Not applicable.
Prevention	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Wear eye or face protection. Wash hands thoroughly after handling. Not applicable. Obtain special instructions before use. Avoid release to the environment. Avoid breathing vapor. Wear eye or face protection. Wash hands thoroughly after handling.
Response	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Not applicable. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Not applicable. Not applicable. Store locked up. Not applicable.
Disposal	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Not applicable. Not applicable. Not applicable. Not applicable.
Other hazards which do not result in classification	: Not available.	

Section 2. Hazards identification

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
SensationPlus FFPE Labeling Core Module		
Fragment and Label Buffer Mix		
arsenic compounds	10.7	124-65-2
cobalt dichloride	0.12	7646-79-9
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
RNase Inhibitor		
glycerol	50	56-81-5
Fragment and Label Enzyme Mix		
glycerol	50	56-81-5

Section 3. Composition/information on ingredients

SensationPlus WT Labeling Module Exo-Free Klenow glycerol	50	56-81-5
RNase H glycerol	50	56-81-5
WT Stop Solution sodium hydroxide	2	1310-73-2
WT Neutralization Mix Tris Hydrochloride	15.7	1185-53-1
WT Labeling Primer Mix Tris Hydrochloride potassium chloride	3.9 2.8	1185-53-1 7447-40-7

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.

SensationPlus FFPE
Labeling Core 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. Get medical attention.

SensationPlus WT Labeling
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.

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.

SensationPlus FFPE

Remove victim to fresh air and keep at rest in a

Section 4. First aid measures

	Labeling Core Module	position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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 the event of any complaints or symptoms, avoid further exposure.
	SensationPlus WT Labeling 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.
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.
	SensationPlus FFPE Labeling Core Module	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	SensationPlus WT Labeling 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.
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

Section 4. First aid measures

		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.
	SensationPlus FFPE Labeling Core Module	Get medical attention immediately. Call a poison center or physician. 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. 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.
	SensationPlus WT Labeling 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.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: SensationPlus FFPE Amplification Module	Causes eye irritation.
RNA Purification Beads Amplification	No known significant effects or critical hazards.
SensationPlus FFPE Labeling Core Module	No known significant effects or critical hazards.
SensationPlus WT Labeling Module	Causes eye irritation.

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.
SensationPlus FFPE Labeling Core Module	Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
SensationPlus WT Labeling Module	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed

Section 4. First aid measures

Skin contact	: SensationPlus FFPE Amplification Module	following exposure. Causes mild skin irritation.
	RNA Purification Beads Amplification	No known significant effects or critical hazards.
	SensationPlus FFPE Labeling Core Module	No known significant effects or critical hazards.
Ingestion	SensationPlus WT Labeling Module	Causes mild skin irritation.
	: 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	SensationPlus FFPE Labeling Core Module	Toxic if swallowed.
	SensationPlus WT Labeling Module	Irritating to mouth, throat and stomach.
Eye contact	: SensationPlus FFPE Amplification Module	Adverse symptoms may include the following: pain or irritation watering redness
	RNA Purification Beads Amplification	No specific data.
	SensationPlus FFPE Labeling Core Module	No specific data.
Inhalation	SensationPlus WT Labeling Module	Adverse symptoms may include the following: pain or irritation watering redness
	: SensationPlus FFPE Amplification Module	No specific data.
	RNA Purification Beads Amplification	No specific data.
Skin contact	SensationPlus FFPE Labeling Core Module	Adverse symptoms may include the following: wheezing and breathing difficulties asthma reduced fetal weight increase in fetal deaths skeletal malformations
	SensationPlus WT Labeling Module	No specific data.
	: SensationPlus FFPE Amplification Module	Adverse symptoms may include the following: irritation redness
Skin contact	RNA Purification Beads Amplification	No specific data.
	SensationPlus FFPE Labeling Core Module	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	SensationPlus WT Labeling Module	Adverse symptoms may include the following: irritation redness
Ingestion	: SensationPlus FFPE Amplification Module	No specific data.
	RNA Purification Beads Amplification	No specific data.
	SensationPlus FFPE Labeling Core Module	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

Section 4. First aid measures

SensationPlus WT Labeling Module 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.
 SensationPlus FFPE Labeling Core Module No specific treatment.
 SensationPlus WT Labeling Module 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.
 SensationPlus FFPE Labeling Core Module Use an extinguishing agent suitable for the surrounding fire.
 SensationPlus WT Labeling Module Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : SensationPlus FFPE Amplification Module None known.
 RNA Purification Beads Amplification None known.
 SensationPlus FFPE Labeling Core Module None known.
 SensationPlus WT Labeling Module 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.
 SensationPlus FFPE Labeling Core Module In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
 SensationPlus WT Labeling Module 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.

Section 5. Fire-fighting measures

	SensationPlus FFPE Labeling Core Module	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
	SensationPlus WT Labeling Module	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds
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.
	SensationPlus FFPE Labeling Core 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.
	SensationPlus WT Labeling 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.
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.
	SensationPlus FFPE Labeling Core Module	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	SensationPlus WT Labeling Module	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).

Section 6. Accidental release measures

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.
- 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.
	SensationPlus FFPE Labeling Core 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. Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.
	SensationPlus WT Labeling Module	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled,

Section 7. Handling and storage

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.

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/m ³ 8 hour(s). Form: Inhalable fraction
T7 Enzyme Mix glycerol	ACGIH TLV (United States, 2/2010). TWA: 10 mg/m ³ 8 hour(s). Form: Inhalable fraction
SensationPlus First Strand cDNA Synthesis Reagents RNase Inhibitor glycerol	ACGIH TLV (United States, 2/2010). TWA: 10 mg/m ³ 8 hour(s). Form: Inhalable fraction
RT Enzyme Mix glycerol	ACGIH TLV (United States, 2/2010). TWA: 10 mg/m ³ 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/m ³ , (as Sodium azide) Form: as Sodium azide
SensationPlus FFPE Labeling Core Module Fragment and Label Buffer Mix arsenic compounds cobalt dichloride	ACGIH TLV (United States, 2/2010). TWA: 0.01 mg/m ³ , (as As) 8 hour(s). ACGIH TLV (United States, 2/2010). TWA: 0.02 mg/m ³ , (as Co) 8 hour(s). Form:

Section 8. Exposure controls/personal protection

<p>RT Enzyme Mix glycerol</p>	<p>Inorganic</p> <p>ACGIH TLV (United States, 2/2010). TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction</p>
<p>RNase Inhibitor glycerol</p>	<p>ACGIH TLV (United States, 2/2010). TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction</p>
<p>Fragment and Label Enzyme Mix glycerol</p>	<p>ACGIH TLV (United States, 2/2010). TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction</p>
<p>SensationPlus WT Labeling Module Exo-Free Klenow glycerol</p>	<p>ACGIH TLV (United States, 2/2010). TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction</p>
<p>RNase H glycerol</p>	<p>ACGIH TLV (United States, 2/2010). TWA: 10 mg/m³ 8 hour(s). Form: Inhalable fraction</p>
<p>WT Stop Solution sodium hydroxide</p>	<p>ACGIH TLV (United States, 2/2010). C: 2 mg/m³</p>

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.

Section 8. Exposure controls/personal protection

- 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.
SensationPlus FFPE Labeling Core Module Liquid.
SensationPlus WT Labeling Module Liquid.
- Color** : SensationPlus FFPE Amplification Module Not available.
RNA Purification Beads Amplification Not available.
SensationPlus FFPE Labeling Core Module Not available.
SensationPlus WT Labeling Module Not available.
- Odor** : SensationPlus FFPE Amplification Module Not available.
RNA Purification Beads Amplification Not available.
SensationPlus FFPE Labeling Core Module Not available.
SensationPlus WT Labeling Module Not available.
- Odor threshold** : Not available.
- pH** : SensationPlus FFPE Amplification Module Not available.
RNA Purification Beads Amplification Not available.
SensationPlus FFPE Labeling Core Module Not available.
SensationPlus WT Labeling Module Not available.
- Melting point** : SensationPlus FFPE Amplification Module Not available.
RNA Purification Beads Amplification Not available.
SensationPlus FFPE Labeling Core Module Not available.
SensationPlus WT Labeling Module Not available.

Section 9. Physical and chemical properties

Boiling point	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Flash point	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Burning time	: SensationPlus FFPE Amplification Module	Not applicable.
	RNA Purification Beads Amplification	Not applicable.
	SensationPlus FFPE Labeling Core Module	Not applicable.
	SensationPlus WT Labeling Module	Not applicable.
Burning rate	: Not applicable.	
Evaporation rate	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Vapor pressure	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Vapor density	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.

Section 9. Physical and chemical properties

Relative density	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Solubility	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Partition coefficient: n-octanol/water	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Auto-ignition temperature	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Decomposition temperature	: Not available.	
Viscosity	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	No specific test data related to reactivity available for this product or its ingredients.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	The product is stable.
	SensationPlus WT Labeling Module	The product is stable.

Section 10. Stability and reactivity

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.
	SensationPlus FFPE Labeling Core Module	Under normal conditions of storage and use, hazardous reactions will not occur.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	No specific data.
	SensationPlus WT Labeling Module	No specific data.
Incompatible materials	: SensationPlus FFPE Amplification Module	No specific data.
	RNA Purification Beads Amplification	No specific data.
	SensationPlus FFPE Labeling Core Module	No specific data.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	SensationPlus WT Labeling Module	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	-

Section 11. Toxicological information

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 LD50 Dermal LD50 Oral	Rabbit Rat Rat	20 mg/kg 50 mg/kg 27 mg/kg	- - -
SensationPlus FFPE Labeling Core Module Fragment and Label Buffer Mix arsenic compounds cobalt dichloride	LD50 Oral LD50 Oral	Rat Rat	2600 mg/kg 80 mg/kg	- -
RT Buffer Mix potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
RT Enzyme Mix glycerol	LD50 Oral	Rat	12600 mg/kg	-
RNase Inhibitor glycerol	LD50 Oral	Rat	12600 mg/kg	-
Fragment and Label Enzyme Mix glycerol	LD50 Oral	Rat	12600 mg/kg	-
SensationPlus WT Labeling Module Exo-Free Klenow glycerol	LD50 Oral	Rat	12600 mg/kg	-
RNase H glycerol	LD50 Oral	Rat	12600 mg/kg	-
WT Labeling Primer Mix potassium chloride	LD50 Oral	Rat	2600 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	-

Section 11. Toxicological information

T7 Enzyme Mix glycerol	Eyes - Mild irritant	Rabbit	-	milligrams	-
	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	-
	24 hours 500 milligrams	-			
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
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	-
	24 hours 500 milligrams	-			
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
SensationPlus FFPE Labeling Core Module 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	-
	24 hours 500 milligrams	-			
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
RNase Inhibitor glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	24 hours 500 milligrams	-			
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Fragment and Label Enzyme Mix glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	24 hours 500 milligrams	-			
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
SensationPlus WT Labeling Module Exo-Free Klenow glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	24 hours 500 milligrams	-			
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
RNase H glycerol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	24 hours 500 milligrams	-			
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Section 11. Toxicological information

WT Stop Solution sodium hydroxide	Eyes - Severe irritant	Monkey	-	milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 1 Percent	-
	Eyes - Severe irritant	Rabbit	-	400 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 1 milligrams	-
	Skin - Mild irritant	Human	-	24 hours 2 Percent	-
WT Labeling Primer Mix potassium chloride	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - 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

Section 11. Toxicological information

SensationPlus FFPE Labeling Core Module 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
SensationPlus WT Labeling Module WT Neutralization Mix Tris Hydrochloride	Category 3	Inhalation	Respiratory tract irritation
WT Labeling Primer Mix Tris Hydrochloride	Category 3	Inhalation	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.**Potential acute health effects**

Eye contact	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Causes eye irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes eye irritation.
Inhalation	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. No known significant effects or critical hazards. Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Causes mild skin irritation. No known significant effects or critical hazards. No known significant effects or critical hazards. Causes mild skin irritation.
Ingestion	: SensationPlus FFPE Amplification Module RNA Purification Beads Amplification SensationPlus FFPE Labeling Core Module SensationPlus WT Labeling Module	Irritating to mouth, throat and stomach. No known significant effects or critical hazards. Toxic if swallowed. Irritating to mouth, throat and stomach.

Section 11. Toxicological information

Module

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.
	SensationPlus FFPE Labeling Core Module	No specific data.
	SensationPlus WT Labeling Module	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: SensationPlus FFPE Amplification Module	No specific data.
	RNA Purification Beads Amplification	No specific data.
	SensationPlus FFPE Labeling Core Module	Adverse symptoms may include the following: wheezing and breathing difficulties asthma reduced fetal weight increase in fetal deaths skeletal malformations
	SensationPlus WT Labeling Module	No specific data.
Skin contact	: SensationPlus FFPE Amplification Module	Adverse symptoms may include the following: irritation redness
	RNA Purification Beads Amplification	No specific data.
	SensationPlus FFPE Labeling Core Module	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	SensationPlus WT Labeling Module	Adverse symptoms may include the following: irritation redness
Ingestion	: SensationPlus FFPE Amplification Module	No specific data.
	RNA Purification Beads Amplification	No specific data.
	SensationPlus FFPE Labeling Core Module	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
	SensationPlus WT Labeling Module	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

Section 11. Toxicological information

Potential immediate effects	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
Potential delayed effects	: SensationPlus FFPE Amplification Module	Not available.
	RNA Purification Beads Amplification	Not available.
	SensationPlus FFPE Labeling Core Module	Not available.
	SensationPlus WT Labeling Module	Not available.
<u>Potential chronic health effects</u>		
Not available.		
General	: SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
	RNA Purification Beads Amplification	No known significant effects or critical hazards.
	SensationPlus FFPE Labeling Core Module	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	May cause cancer if inhaled. Risk of cancer depends on duration and level of exposure.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	Suspected of causing genetic defects.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	May damage the unborn child.
	SensationPlus WT Labeling Module	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.
	SensationPlus FFPE Labeling Core Module	No known significant effects or critical hazards.
	SensationPlus WT Labeling Module	No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects	:	SensationPlus FFPE Amplification Module	No known significant effects or critical hazards.
		RNA Purification Beads Amplification	No known significant effects or critical hazards.
		SensationPlus FFPE Labeling Core Module	May damage fertility.
		SensationPlus WT Labeling Module	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
SensationPlus FFPE Labeling Core Module RT Buffer Mix Oral	92857.1 mg/kg
DTT Oral	33333.3 mg/kg
SensationPlus WT Labeling Module WT Labeling Primer Mix Oral	92857.1 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-dimercaptobutane-2,3-diol	Acute LC50 27000 ug/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
T7 Enzyme Mix glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours

Section 12. Ecological information

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 Acute EC50 83000 ug/L Fresh water Acute LC50 16.5 mg/L Fresh water Acute LC50 435000 ug/L Fresh water	Algae - Navicula seminulum Daphnia - Daphnia magna - 12 hours Crustaceans - Diaphanosoma brachyurum - Neonate - 24 hours Fish - Gambusia affinis - Adult	96 hours 48 hours 48 hours 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 Acute EC50 6.4 mg/L Fresh water Acute EC50 4.2 mg/L Fresh water Acute LC50 0.68 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata Crustaceans - Simocephalus serrulatus - Larvae Daphnia - Daphnia pulex - Larvae Fish - Lepomis macrochirus - 0.6 g	96 hours 48 hours 48 hours 96 hours
SensationPlus FFPE Labeling Core Module Fragment and Label Buffer Mix arsenic compounds	Acute EC50 35700 ug/L Fresh water Acute EC50 53.5 ppm Fresh water Acute LC50 17 mg/L Fresh water	Algae - Scenedesmus acutus var. acutus - Exponential growth phase Daphnia - Daphnia magna - <24 hours Fish - Lepomis macrochirus - 0.8 g	96 hours 48 hours 96 hours
cobalt dichloride	Acute EC50 522 ug/L Fresh water Acute EC50 1110 ug/L Fresh water Acute LC50 1.67 mg/L Fresh water Acute LC50 1406 ug/L Fresh water	Algae - Chlorella vulgaris - Exponential growth phase Daphnia - Daphnia magna - 12 hours Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours Fish - Oncorhynchus mykiss - Fry - 29 to 32 mm	96 hours 48 hours 48 hours 96 hours
RT Buffer Mix potassium chloride	Acute EC50 1337000 ug/L Fresh water Acute EC50 83000 ug/L Fresh water Acute LC50 16.5 mg/L Fresh water	Algae - Navicula seminulum Daphnia - Daphnia magna - 12 hours Crustaceans - Diaphanosoma brachyurum - Neonate - 24	96 hours 48 hours 48 hours

Section 12. Ecological information

RT Enzyme Mix glycerol	Acute LC50 435000 ug/L Fresh water	hours Fish - Gambusia affinis - Adult	96 hours
DTT (R*,R*)-1,4-dimercaptobutane-2,3-diol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
RNase Inhibitor glycerol	Acute LC50 27000 ug/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
Fragment and Label Enzyme Mix glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
SensationPlus WT Labeling Module Exo-Free Klenow glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
RNase H glycerol	Acute LC50 54 ml/L Fresh water	Fish - Oncorhynchus mykiss - 0.9 g	96 hours
WT Stop Solution sodium hydroxide	Acute EC50 40.38 mg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute LC50 125000 ug/L Fresh water	Fish - Gambusia affinis - Adult	96 hours
WT Labeling Primer 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

[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

Section 12. Ecological information

SensationPlus First Strand cDNA Synthesis Reagents			
RNase Inhibitor glycerol	-1.76	-	low
RT Enzyme Mix glycerol	-1.76	-	low
SensationPlus FFPE Labeling Core Module			
Fragment and Label Buffer Mix cobalt dichloride	0.85	-	low
RT Enzyme Mix glycerol	-1.76	-	low
RNase Inhibitor glycerol	-1.76	-	low
Fragment and Label Enzyme Mix glycerol	-1.76	-	low
SensationPlus WT Labeling Module			
Exo-Free Klenow glycerol	-1.76	-	low
RNase H 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.
SensationPlus FFPE Labeling Core Module Not available.
SensationPlus WT Labeling Module Not available.

Mobility : SensationPlus FFPE Amplification Module Not available.
RNA Purification Beads Amplification Not available.
SensationPlus FFPE Labeling Core Module Not available.
SensationPlus WT Labeling Module 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.
SensationPlus FFPE Labeling Core Module No known significant effects or critical hazards.
SensationPlus WT Labeling Module 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.
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

Section 16. Other information

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

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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.