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<b>Material Safety Data Sheet</b>	Revision Date	04/15/2015
<b>Prepared for US/CN/EU Markets as International Trade</b>	Origination Date	04/15/2015
<b>Product Name</b>	<b>ThunderBolts Cancer Panel</b>	

## 1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY / UNDERTAKING

<b>Product Name</b>	<b>ThunderBolts Myeloid Cancer Panel, ThunderBolts Cancer Panel</b>
<b>Synonym (s)</b>	ThunderBolts Myeloid Panel Pack, ThunderBolts Myeloid Panel Reagent Pack, ThunderBolts Myeloid Panel Library Set, ThunderBolts Panel, ThunderBolts Library, ThunderBolts Cancer Panel
<b>Product Codes</b>	Various; (e.g. 30-07977, 30-07978, 30-07747, 30-07748, 30-07757, 30-07758)
<b>REACH Registration Number</b>	Not available
<b>Chemical Family</b>	This product is a clear liquid.
<b>Product Use/s</b>	New Consumer/Commercial End Product. This finished product provides a laboratory-grade fluid with an as-designed, intended-use consisting of direct end-use application, such as operating RainDance Instruments and PCR thermocycling. The product has an end-use application in controlled, non-clinical/non-diagnostic laboratories where protection from extreme heat is desired (see, Product Installation and Use Instructions that accompany the product).
<b>Company / Undertaking Identification</b>	RainDance Technologies, Inc. (USA) 749 Middlesex Turnpike, Billerica, MA 01821
<b>Suppliers</b>	Imported to CN and EU by RainDance Technologies, Inc. Billerica, MA (USA)
<b>Emergency Telephone</b>	North America: CHEMTREC 800-424-9300 EU: CHEMTREC (+1) 703-527-3887 (collect calls accepted, USA contact)
<b>Non-emergency health/safety information</b>	North America: 978-495-3300 EU: (+1) 978-495-3300 (USA contact)
<b>e-mail address</b>	customercare@raindancetech.com

## 2. HAZARDS IDENTIFICATION

<b>No Symbol</b>	4.1 — Hazardous to the aquatic environment — Chronic Hazard, Category 4
<b>Physical &amp; Chemical:</b>	NOT CLASSIFIED UNDER GHS
<b>Health:</b>	NOT CLASSIFIED UNDER GHS
<b>Environmental:</b>	MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE.
<b>Further Information:</b>	NA

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS-No	EINECS/ELINCS	Classification	Concentration %
Oligonucleotides	N/A			0.02 – 0.08 uM
Water	7732-18-5			>90%
Tris hydrochloride solution	77-86-1			10mM
Further Information: N/A				

### 4. FIRST AID MEASURES


General information	Not a hazardous substance or mixture
Inhalation	If inhaled, provide fresh air, warmth and rest.
Skin contact	Clean areas of skin affected with soap and plenty of water.
Eye contact	In case of contact with eyes, rinse immediately with plenty of water until irritation subsides.
Ingestion	Allow the patient to vomit on his own accord. Give copious water to drink and if necessary seek medical advice.
Further information	N/A

### 5. FIRE FIGHTING MEASURES

General hazard	THE PRODUCT IS NON-COMBUSTIBLE
Extinguishing media	To suit local surroundings (e.g. water spray, carbon dioxide, foam, chemical powder)
Extinguishing media not to be used	N/A
Special exposure hazards	Decomposition products released in a fire, (e.g. oxides of carbon, hydrogen fluoride), should be considered toxic if inhaled.
Protective equipment	Wear self-contained breathing apparatus, if necessary.
Further information	No further information

### 6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up	Take up with absorbent material, e.g. sand, sawdust, into tightly closable containers. Label container and dispose of as prescribed.
Environmental considerations	Do not allow to get into drains.
Further information	N/A

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## 7. HANDLING AND STORAGE

<b>Advice on safe handling</b>	Handle in accordance with good hygiene and safety practice.
<b>Storage conditions</b>	Ensure adequate ventilation of the storage area. Keep containers tightly closed, cool and dry.
<b>Further information</b>	N/A

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure limit values</b>	OSHA	Permissible Exposure Limit (PEL/TWA)	Not established
	ACGIH	Threshold Limit Value (TLV)	Not established
	Quebec	Permissible Exposure Value (PEV)	Not established
	Ontario	Occupational Exposure Level (OEL)	Not established
	Netherlands	Maximaal Aanvaarde Concentratie (MAC)	Not established
	Germany	Maximale Arbeitsplatzkonzentrationen (MAK)	Not established
	United Kingdom	Workplace Exposure Limit (WEL)	Not established
<b>Engineering controls</b>	Ensure adequate ventilation of working area.		
<b>Personal protection</b>	Observe normal standards for handling chemicals. Wash hands before breaks and after work. Wear personal protective equipment appropriate to the task (see below).		
<b>Eye protection</b>	Safety goggles.		
<b>Skin protection</b>	Protective gloves.		
<b>Respiratory protection</b>	Respirator or air fed visor (if ventilation is insufficient).		
<b>Other personal protection</b>	Protective overalls.		
<b>Environmental exposure controls</b>	N/A		
<b>Further Information</b>	Personal protective equipment (PPE) should be selected as appropriate to the nature and aggressiveness of the identified hazard(s). PPE should be regularly inspected for such things as soundness against leaks, bad fitting and possible chemical penetration. Recommended safe user periods should never be exceeded.		

## 9. PHYSICAL & CHEMICAL PROPERTIES

<b>Physical form</b>	Liquid
<b>Color</b>	Colorless
<b>Odor</b>	Not applicable
<b>Molecular weight</b>	Not applicable
<b>Molecular formula</b>	Not applicable

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## 9. PHYSICAL & CHEMICAL PROPERTIES

pH	Not determined
Boiling pt / range	100°C (212°F)
Melting pt / range	0°C (32°F)
General Flammability	NON-COMBUSTIBLE
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Relative Density	1.0
Explosive properties	Not available
Oxidizing properties	Not available
Vapor pressure	Not available
Vapor Density	Not available
Relative Evaporation Rate (n-Butyl Acetate = 1)	Not available
Viscosity	Not available
Water solubility	Not available
Partition coefficient (log P or log K n-octanol / water)	Not available
Additional information	Not applicable

## 10. STABILITY & REACTIVITY

Stability	Stable under normal conditions of handling.
Conditions to avoid	Data not supplied
Incompatible materials	Strong bases.
Hazardous decomposition products	Data not supplied.
Further information	Not applicable

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity	No data available	N/A	N/A
Acute irritation/corrosivity	No data available	No data available	

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## 11. TOXICOLOGICAL INFORMATION

<b>Sensitization</b>	No sensitizing effects known.
<b>Repeated dose toxicity</b>	No data available.
<b>CMR effects</b>	No classification data on carcinogenic properties of this product is available from NTP, IARC.
<b>Further information</b>	Consideration should be given to section 15 of this safety data sheet, noting any identified hazards for this product and route of entry whereby harm could be caused to body tissues and organs.

## 12. ECOLOGICAL INFORMATION


<b>Ecotoxicity</b>	No data available	N/A	N/A
<b>Mobility</b>	No data available.		
<b>Persistence and degradability</b>	No data available.		
<b>Bioaccumulative potential</b>	No data available.		
<b>Result of PBT assessment</b>	No data available.		
<b>Other adverse effects</b>	No data available.		
<b>Water Hazard Class</b>	No data available.		

## 13. DISPOSAL CONSIDERATIONS

<b>Advice on disposal</b>	In accordance with national and local authority regulations.
<b>Contaminated packaging</b>	Treat empty containers in the same way as the product.
<b>European Waste Catalogue Number</b>	Not a dangerous good
<b>Further information</b>	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. TRANSPORT INFORMATION

<b>United Nations number</b>	The product is not classified for transport
<b>Proper shipping name</b>	N/A
<b>Class</b>	N/A
<b>Subsidiary risk/s</b>	N/A
<b>Packing group</b>	N/A
<b>Marine pollutant</b>	The product is not a Marine Pollutant per IMDG

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## 14. TRANSPORT INFORMATION


Emergency action code	N/A
Hazard Identification Number	N/A
Further information	Not a dangerous good (DOT (USA), IMDG, IATA)

## 15. REGULATORY INFORMATION

Classification & labelling	The product is categorised in accordance with the Classification, Labelling & Packaging Regulation ((EC) No 1272/2008).	
No Symbol	No hazard	
Hazard statement	N/A	N/A
Precautionary statements	N/A	N/A
	N/A	N/A

Federal Regulations (US)	<b>TSCA Section 5(a)(2):</b>		
	N/A – The finished product doesn not contain chemical substance considered as a “significant new use.”		
	<b>TSCA Section 8b – Inventory Status:</b>		
	All chemicals comprising this product are either exempt or listed on the TSCA Inventory.		
	<b>TSCA Section 12b – Export Notification:</b>		
	N/A – The finished product does not contain chemical substances or mixtures listed in the in final TSCA Section 4 test rules.		
	<b>Chemical</b> N/A	<b>CAS#</b> N/A	<b>PMN</b> N/A
	<b>CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT)</b>		
	Chemicals present in the product which could require reporting under the statute:		
	<b>Chemical</b> None	<b>CAS # (RQ)</b> N/A (N/A)	<b>Sec. 302 EDS</b> No
	<b>SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT) Section 313</b>		
	The finished product does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.		
	<b>Chemical</b> None	<b>CAS #</b> N/A	<b>% Wt</b> N/A
	<b>Section 311/312 HAZARD CATEGORIES - None</b>		
	<b>Fire Hazard:</b> N/A / <b>Pressure Hazard:</b> N/A / <b>Reactivity Hazard:</b> N/A / <b>Immediate Hazard:</b> N/A / <b>Delayed Hazard:</b> N/A		<b>Other:</b> N/A




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## 15. REGULATORY INFORMATION

State Regulations (US)	<b>California Proposition 65</b> The following chemicals identified to exist in the finished product as distributed into commerce are known to the State of California to cause cancer, birth defects, or other reproductive harm:		
	<b>Chemical</b>	<b>CAS #</b>	<b>% Wt</b>
	None	N/A	N/A
International Regulations (Non-US)	<b>Canadian Domestic Substance List (DSL)</b> All ingredients remaining in the finished product as distributed into commerce are exempt from, or included on, the Domestic Substances List.		
	<b>WHMIS Classifications</b> This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Controlled Products Regulations.		
	<b>NPRI and Ontario Regulation 127/01</b> This product contains the following chemicals subject to the reporting requirements of Canada NPRI +/-or Ont. Reg. 127/01:		
	<b>Chemical</b>	<b>CAS #</b>	<b>% Wt</b>
	None	N/A	N/A
	<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b> All ingredients remaining in the finished product as distributed into commerce are exempt from, or included on, the European Inventory of Existing Commercial Chemical Substances.		

## 16. OTHER INFORMATION

General summary	Safety Data Sheet based on information and data supplied by the manufacturer.				
Further information					
	Rating	Hazard	Tris	Oligonucleotides	Water
	HMIS	Health	2	0	0
		Chronic Health	---	---	---
		Flamibility	0	0	0
		Physical	0	0	0
	NFPA	Health	2	0	0
		Fire	0	0	0
		Reactivity	0	0	0
Key to Hazard Statement in Section 3	N/A	N/A			
Sources of data	Manufacturer's Safety Data Sheet.				
EU Classification (1999/45/EC)	No symbol				
Risk phrases	N/A	N/A			

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## 16. OTHER INFORMATION

<b>Preparation Information</b>	CR Ref.: <i>CR1223</i>	Supersedes: <i>Draft</i>
	Date of Translation from English: ----	Translator: ----
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