

### SAFETY DATA SHEET Deuterated Linoleic Acid Oxylipins LC-MS Mixture Revision: 02/25/2017

	according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008								
	Section 1.	Identification of the Substance/Mixture and of th	ne Company/Undertaking						
1.1	Product Code: Product Name:	20795 Deuterated Linoleic Acid Oxylipins LC-MS Mixt	ture						
1.2	Relevant identified uses of	of the substance or mixture and uses advised aga	ainst:						
	Relevant identified uses	For research use only, not for human or veterin	nary use.						
1.3	Details of the Supplier of	·	-						
	Company Name:	Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108							
	Web site address:	www.caymanchem.com							
	Information:	Cayman Chemical Company	+1 (734)971-3335						
1.4	Emergency telephone nu	mber:							
	Emergency Contact:	CHEMTREC Within USA and Canada:	+1 (800)424-9300						
		CHEMTREC Outside USA and Canada:	+1 (703)527-3887						
		Section 2. Hazards Identifica	ation						
2.1	Classification of the Subs	stance or Mixture:							
	Flammable Liquids, Ca	tegory 2							
2.2	Label Elements:								
	GHS Signal Word: GHS Hazard Phrases: H225: Highly flammable	Danger							
	H225: Highly flammable liquid and vapor. GHS Precaution Phrases:								
	P210: Keep away from {heat/sparks/open flames/hot surfaces} No smoking.								
	P280: Wear {protective gloves/protective clothing/eye protection/face protection}.								
	GHS Response Phrases:								
	-	KIN (or hair): Remove/take off immediately all contar	minated clothing. Rinse skin with						
	GHS Storage and Disposal Phrases:								
	Please refer to Section 7	for Storage and Section 13 for Disposal information.							
2.3	Adverse Human Health	Material may be irritating to the mucous membrane	es and upper respiratory tract.						
	Effects and Symptoms:	May be harmful by inhalation, ingestion, or skin ab	-						
	May cause eye, skin, or respiratory system irritation.								
		To the best of our knowledge, the toxicological pro	perties have not been thoroughly investigated.						
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# SAFETY DATA SHEET Page: 2 of Deuterated Linoleic Acid Oxylipins LC-MS Mixture Revision: 02/25/2017

CAS # RTEC		Hazardous Comp REACH Registra	oonents (Chemical Name)/ tion No.	Concentration	EC No./ EC Index No.	GHS Classification	
NA NA		(±)12(13)-DiHOME-0	14	< 0.001 %	NA NA	No data available.	
13940 NA	)8-39-2	13(S)-HODE-d4		< 0.001 %	NA NA	No data available.	
NA NA		13-OxoODE-d3		< 0.001 %	NA NA	No data available.	
NA NA		(±)12(13)-EpOME-d4	4	< 0.001 %	NA NA	No data available.	
64- KQ630	17-5 )0000	Ethyl alcohol		99.996 %	200-578-6 603-002-00-5	Flam. Liq. 2: H225	
			Section 4. Fi	rst Aid Meas	ures		
.1	Measur	otion of First Aid es: of Inhalation:	Remove to fresh air. If not br	eathing, give artifici	al respiration or giv	ve oxygen by trained personne	
			Get immediate medical atten	tion.			
	In Case	of Skin Contact:	Immediately wash skin with s clothing. Get medical attention			5 minutes. Remove contamina efore reuse.	
	In Case	In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.					
			and tested by medical persor	nnel.			
	In Case	of Ingestion:	Wash out mouth with water p unconscious person. Get me	provided person is c	-	ive anything by mouth to an ng unless directed to do so by	
1.2	Importa	ant Symptoms and , Both Acute and	Wash out mouth with water p	orovided person is c dical attention. Do N CNS depression, dro	NOT induce vomitii	ng unless directed to do so by e, heart damage, lassitude	
4.2	Importa Effects,	ant Symptoms and , Both Acute and	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver	orovided person is c dical attention. Do N CNS depression, dro r damage, narcosis,	IOT induce vomitii wsiness, headach reproductive effec	ng unless directed to do so by e, heart damage, lassitude	
	Importa Effects, Delayec	ant Symptoms and , Both Acute and	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C	orovided person is c dical attention. Do N CNS depression, dro r damage, narcosis, Fighting Me	NOT induce vomitii wsiness, headach reproductive effec ASURES	ng unless directed to do so by e, heart damage, lassitude cts, teratogenic effects.	
	Importa Effects, Delayec	ant Symptoms and , Both Acute and d:	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver Section 5. Fire	provided person is c dical attention. Do N CNS depression, dro damage, narcosis, Fighting Me carbon dioxide, wate	NOT induce vomitin wsiness, headach reproductive effect <b>ASURES</b> er, or dry chemical	ng unless directed to do so by e, heart damage, lassitude cts, teratogenic effects.	
	Importa Effects, Delayec Suitable Media:	ant Symptoms and , Both Acute and d: e Extinguishing	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver Section 5. Fire Use alcohol-resistant foam, o	provided person is c dical attention. Do N CNS depression, dro r damage, narcosis, <b>Fighting Me</b> carbon dioxide, wate exposed containers	NOT induce vomitin wsiness, headach reproductive effect <b>ASURES</b> er, or dry chemical	ng unless directed to do so by e, heart damage, lassitude cts, teratogenic effects.	
4.2 5.1	Importa Effects, Delayed Suitable Media: Unsuita Media:	ant Symptoms and , Both Acute and d: e Extinguishing able Extinguishing	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver Section 5. Fire Use alcohol-resistant foam, o Use water spray to cool fire-	provided person is c dical attention. Do N CNS depression, dro r damage, narcosis, <b>Fighting Me</b> carbon dioxide, wate exposed containers inefficient.	NOT induce vomitii wsiness, headach reproductive effec <b>ASUICES</b> er, or dry chemical	ng unless directed to do so by e, heart damage, lassitude ets, teratogenic effects.	
5.1	Importa Effects, Delayed Suitable Media: Unsuita Media:	ant Symptoms and , Both Acute and d: e Extinguishing able Extinguishing	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver Section 5. Fire Use alcohol-resistant foam, o Use water spray to cool fire-o A solid water stream may be	erovided person is c dical attention. Do N CNS depression, dro r damage, narcosis, <b>Fighting Me</b> carbon dioxide, wate exposed containers inefficient.	NOT induce vomitiin wisiness, headach reproductive effect assures as at temperatures a tions.	ng unless directed to do so by e, heart damage, lassitude cts, teratogenic effects.	
j.1	Importa Effects, Delayed Suitable Media: Unsuita Media: Flamma	ant Symptoms and , Both Acute and d: e Extinguishing able Extinguishing able Properties an s:	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver Section 5. Fire Use alcohol-resistant foam, o Use water spray to cool fire-o J A solid water stream may be dCan release vapors that form Container explosion may occ Emits toxic fumes under fire Sensitive to static discharge. Vapors can travel to a source	brovided person is c dical attention. Do N CNS depression, dro r damage, narcosis, <b>Fighting Me</b> carbon dioxide, wate exposed containers inefficient. In explosive mixtures cur under fire conditi conditions.	NOT induce vomitiin wisiness, headach reproductive effect assures as at temperatures a tions.	ng unless directed to do so by e, heart damage, lassitude ets, teratogenic effects.	
5.1	Importa Effects, Delayed Suitable Media: Unsuita Media: Flamma Hazards	ant Symptoms and , Both Acute and d: e Extinguishing able Extinguishing able Properties an s:	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver <b>Section 5. Fire</b> Use alcohol-resistant foam, o Use water spray to cool fire- A solid water stream may be dCan release vapors that form Container explosion may occ Emits toxic fumes under fire Sensitive to static discharge. Vapors can travel to a source No data available.	erovided person is c dical attention. Do N CNS depression, dro r damage, narcosis, e Fighting Me carbon dioxide, wate exposed containers inefficient. n explosive mixtures cur under fire condit conditions. e of ignition and flas osed Cup	NOT induce vomitiin wisiness, headach reproductive effect asures er, or dry chemical er, or dry chemical s at temperatures a ions.	ng unless directed to do so by e, heart damage, lassitude cts, teratogenic effects.	
5.1	Importa Effects, Delayed Suitable Media: Unsuita Media: Flamma Hazards	ant Symptoms and , Both Acute and d: e Extinguishing able Extinguishing able Properties an s:	Wash out mouth with water p unconscious person. Get me medical personnel. May cause anemia, cough, C (weakness, exhaustion), liver Section 5. Fire Use alcohol-resistant foam, o Use water spray to cool fire-o d A solid water stream may be dCan release vapors that form Container explosion may occ Emits toxic fumes under fire Sensitive to static discharge. Vapors can travel to a source No data available. 14.00 C Method Used: Cl	erovided person is c dical attention. Do N CNS depression, dro r damage, narcosis, e Fighting Me carbon dioxide, wate exposed containers inefficient. n explosive mixtures cur under fire condit conditions. e of ignition and flas osed Cup	NOT induce vomitiin wisiness, headach reproductive effect asures er, or dry chemical er, or dry chemical s at temperatures a ions.	ng unless directed to do so by e, heart damage, lassitude cts, teratogenic effects.	



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			ental Release Measures					
6.1	Protective Precautions,		nd provide adequate ventilation.					
			ear a NIOSH approved self-contained breathing a					
	Emergency Procedures:	and appropriate personal	I protection (rubber boots, safety goggles, and hea	avy rubber gloves).				
6.2	Environmental	Take steps to avoid relea	ase into the environment, if safe to do so.					
	Precautions:							
6.3	Methods and Material For Contain spill and collect, as appropriate.							
	<b>Containment and Cleaning</b> Transfer to a chemical waste container for disposal in accordance with local regulations.							
	Up:							
		Section 7. H	landling and Storage					
7.1	Precautions To Be Taken	n Avoid breathing dust/fume	e/gas/mist/vapours/spray.					
	in Handling:	Avoid prolonged or repeat	ted exposure.					
		Keep away from sources of	of ignition.					
		Take precautionary measu	ures against static discharge.					
7.2	Precautions To Be Taken	Keep away from heat, spa						
	in Storing:	Keep container tightly clos						
			information listed on the product insert.					
	Other Precautions:	Hygroscopic.						
	Sec	tion 8. Exposure	Controls/Personal Protection					
8.1	Exposure Parameters:							
CAS	# Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations				
64-17	-5 Ethyl alcohol	ACGIH TLV	TLV: 1000 ppm STEL: 1000 ppm					
		France VL	TWA: 1900 mg/m3 (1000 ppm) STEL: 9500 mg/m3 (5000 ppm)					
		OSHA PELs	PEL: 1000 ppm					
		Britain EH40	TWA: 1920 mg/m3 (1000 ppm) STEL: ()					
8.2	Exposure Controls:							
8.2.1	Engineering Controls	Use process enclosures, I	local exhaust ventilation, or other engineering con	trols to control airbor				
	(Ventilation etc.):	levels below recommended exposure limits.						
8.2.2	Personal protection equipment:							
	Eye Protection:	Safety glasses						
	Protective Gloves:	Compatible chemical-resis	stant gloves					
	Other Protective Clothing	g:Lab coat						
	Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.						
	Work/Hygienic/Maintenan Do not take internally.							
	,0	Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower						
	ce Practices:							
	ce Practices:	Wash thoroughly after har						
	ce Practices:							
	ce Practices:	Wash thoroughly after har						
	ce Practices:	Wash thoroughly after har						



# SAFETY DATA SHEET Page: 4 of Deuterated Linoleic Acid Oxylipins LC-MS Mixture Revision: 02/25/2017

Physical States:       []Gas       []Liquid       []Solid         Appearance and Odor:       A solution in ethanol (1 µg/ml each compound)         pH:       No data.         Meiting Point:       No data.         Boiling Point:       No data.         Flash Pt:       14.00 C         Exaporation Rate:       No data.         Flash Pt:       14.00 C         Mathing Solid (gas):       No data.         Exaporation Rate:       No data.         Exaposite Limits:       LEL: 3.3% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Pressure (vs. Air or mm         Vapor Pressure (vs. Air or mm       No data.         Solubility in Water:       No data.         Cotten (Mather Patition       No data.         Cotten (Information       No data.         Percent Volatile:       No data.         Viscosity:       No data.         10.1       Reactivity:			
Physical States:       []Gas [X]Liquid []Solid         Appearance and Odor:       A solution in ethanol (1 µg/ml each compound)         pH:       No data.         Melting Point:       No data.         Bolling Point:       No data.         Flash P1:       14.00 C         Evaporation Rate:       No data.         Flash P1:       14.00 C         Explosive Limits:       LEL: 3.3% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Pressure (vs. Air or mm         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Pressure (vs. Air or mm         Vapor Density (vs. Air = 1):       No data.         Solubility in Water = 1):       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data.         10.2       Stability Note(s):       Stable []         Stability Note(s):       Stable []         Stability Note(s):       Stable		Se	ection 9. Physical and Chemical Properties
Appearance and Odor:     A solution in ethanol (1 µg/ml each compound)       pH:     No data.       Mething Point:     No data.       Boiling Point:     No data.       Flash Pt:     14.00 C       Keaporation Rate:     No data.       Flash Pt:     14.00 C       Evaporation Rate:     No data.       Flash Pt:     14.00 C       Evaporation Rate:     No data.       Flammability (solid, gas):     No data available.       Explosive Limits:     LEL: 3.3% at 25.0 C       Vapor Pressure (vs. Air or mm     43 MM_HG at 20.0 C       Hg):     Vapor Density (vs. Air = 1):     No data.       Solubility in Water:     No data.       Solubility in Water:     No data.       Coefficient:     363.00 C       Decomposition Premerature:     No data.       Viscosity:     No data.       Viscosity:     No data.       Solubility:     No data.       Viscosity:     No data.       Viscosity:     No data.       Viscosity:     No data.       Coefficient:     No data.       Autoignition Pt:     363.00 C       Decomposition Temperature:     No data.       Viscosity:     No data.       10.1     Reactivity:     No data.       10.2 </th <th>9.1</th> <th>Information on Basic Phys</th> <th>ical and Chemical Properties</th>	9.1	Information on Basic Phys	ical and Chemical Properties
pH:       No data.         Melting Point:       No data.         Boiling Point:       No data.         Flash Pt:       14.00 C         Evaporation Rate:       No data.         Flammability (solid, gas):       No data available.         Explosive Limits:       LEL: 3.3% at 25.0 C       UEL: 19.0% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Wapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.       Specific Gravity (Water = 1):         No data.       Octanol/Water Partition       No data.         Octanol/Water Partition       No data.       Octanol/Water Partition         No data.       Octanol/Water Partition       No data.         Viscosity:       No data.       Octanol/Water Partition         No data.       Specific Gravity (Water = 1):       No data.         Viscosity:       No data.       Otesta.         Viscosity:       No data.       Otesta.         Viscosity:       No data.       No data.         10.1       Reactivity:       No data.         10.2       Stability:       Unstable[]       Stable [X]         10.3       Stabile! stored in accordance with information list		Physical States:	[]Gas [X]Liquid []Solid
Metting Point:       No data.         Boiling Point:       No data.         Flash Pt:       14.00 C Method Used: Closed Cup         Evaporation Rate:       No data.         Flammability (solid, gas):       No data available.         Explosive Limits:       LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Density (vs. Air = 1):         Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       Autoignition Pt:         Autoignition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data.         10.2       Stability Note(s):       Stabile [ 1]         10.3       Stability Note(s):       Stabile [ 1]         10.4       Conditions To Avoid:       Heats         To Avoid:       Istring and sparks         10.5       Incompatibility - Materials alkali metals         To Avoid:       anmmonia peroxi		Appearance and Odor:	A solution in ethanol (1 µg/ml each compound)
Boiling Point::       No data.         Flash Pt:       14.00 C         Flash Pt:       14.00 C         Evaporation Rate:       No data.         Flammability (solid, gas):       No data available.         Explosive Limits:       LEL: 3.3% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Density (vs. Air = 1):         Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       Autoignition Pt:         Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         92       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data.         10.2       Stability Note(s):       Stable [ ]         10.3       Stability Note(s):       Stable [ ]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       rop avoidizing agents         10.4       Conditions To Avoid: <td></td> <td>pH:</td> <td>No data.</td>		pH:	No data.
Flash P1:       14.00 C Method Used: Closed Cup         Evaporation Rate:       No data.         Flammability (solid, gas):       No data available.         Explosive Limits:       LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         OctanolWater Partition       No data.         Coefficient:       Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Stability Note(s):       Stable [X]         10.1       Reactivity:       No data available.         10.2       Stability Note(s):       Stable [X]         10.3       Stability Note(s):       Stable [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       mamonia         peroxides       strong oxidizing agents       strong oxidizing agents         10.6       Hazardous		Melting Point:	No data.
Evaporation Rate:       No data.         Flammability (solid, gas):       No data available.         Explosive Limits:       LEL: 3.3% at 25.0 C       UEL: 19.0% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.       Specific Gravity (Water = 1):         Solubility in Water:       No data.         Solubility in Water:       No data.         Coefficient:       Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       Unstable []         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia       peroxides		Boiling Point:	No data.
Finimability (solid, gas):       No data available.         Explosive Limits:       LEL: 3.3% at 25.0 C       UEL: 19.0% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable[]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur[]       Will not occur[X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals ror awoid:       ammonia peroxides strong oxidizing agents         10.4       Hazardous       carbon dioxide       ammonia peroxides strong oxidizing agents		Flash Pt:	14.00 C Method Used: Closed Cup
Explosive Limits:       LEL: 3.3% at 25.0 C       UEL: 19.0% at 25.0 C         Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.2       Stability:       Unstable []         11.3       Stability:       Unstable []         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia       peroxides         strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm       43 MM_HG at 20.0 C         Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data.         10.2       Stability:       Unstable []         10.3       Stability:       Unstable []         Polymerization:       Will occur []         Vill occur []       Will not occur [X]         10.4       Conditions To Avoid:         harding agents       armonia         peroxides       strong oxidizing agents         10.5       Hazardous       carbon dioxide         peroxides       strong oxidizing agents		Flammability (solid, gas):	No data available.
Hg):       Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Octanol/Water Partition       No data.         Coefficient:       Autoignition Pt:       363.00 C         Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []         10.3       Stability Note(s):       Stable [X]         10.3       Stability Note(s):       Stable [I]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia       perxxides         strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon mono		Explosive Limits:	LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C
Vapor Density (vs. Air = 1):       No data.         Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.1       Reactivity:       No data.         10.2       Stability:       Unstable[]         10.3       Stability:       Unstable[]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia       peroxides         strong oxidizing agents       acabon dioxide         Decomposition or       carbon monoxide		Vapor Pressure (vs. Air or	r mm 43 MM_HG at 20.0 C
Specific Gravity (Water = 1):       No data.         Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia       peroxides         strong oxidizing agents       10.6       Hazardous         Carbon dioxide       Decomposition or       carbon monoxide		Hg):	
Solubility in Water:       No data.         Octanol/Water Partition       No data.         Coefficient:       Autoignition Pt:       363.00 C         Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Section 10. Stability and Reactivity         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []         10.3       Stability Note(s):       Stable [ stored in accordance with information listed on the product insert.         Polymerization:       Will occur [ ]       Will not occur [ X ]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia       peroxides         strong oxidizing agents       strong oxidizing agents       strong oxidizing agents		Vapor Density (vs. Air = 1)	): No data.
Octanol/Water Partition       No data.         Coefficient:       363.00 C         Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         9.2       Section 10. Stability and Reactivity         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia       peroxides         strong oxidizing agents       strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon dioxide       carbon monoxide		Specific Gravity (Water = "	1): No data.
Coefficient:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information Percent Volatile:         No data.       Section 10. Stability and Reactivity         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable [] Stable [X]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur [] Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals         To Avoid:       ammonia peroxides strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		Solubility in Water:	No data.
Autoignition Pt:       363.00 C         Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		Octanol/Water Partition	No data.
Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []         10.3       Stability Note(s):       Stable [x]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials       alkali metals         To Avoid:       ammonia       peroxides         strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		Coefficient:	
Decomposition Temperature:       No data.         Viscosity:       No data.         9.2       Other Information         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []         10.3       Stability Note(s):       Stable [x]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials       alkali metals         To Avoid:       ammonia       peroxides         strong oxidizing agents       strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon monoxide		Autoignition Pt:	363.00 C
Viscosity:       No data.         9.2       Other Information Percent Volatile:       No data.         Percent Volatile:       No data.         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []       Stable [X]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       ammonia         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		-	
9.2       Other Information Percent Volatile:       No data.         Section 10. Stability and Reactivity         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []       Stable [X]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       ammonia         To Avoid:       ammonia       peroxides         strong oxidizing agents       strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide       carbon monoxide			
Percent Volatile:       No data.         Section 10. Stability and Reactivity         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []       Stable [X]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       ammonia         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide	9.2	Other Information	
Section 10. Stability and Reactivity         10.1       Reactivity:       No data available.         10.2       Stability:       Unstable [] Stable [X]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide			No data.
10.1       Reactivity:       No data available.         10.2       Stability:       Unstable []       Stable [X]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals         To Avoid:       ammonia         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide			
10.2       Stability:       Unstable []       Stable [X]         10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       To Avoid:         To Avoid:       ammonia         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide			· · · ·
10.3       Stability Note(s):       Stable if stored in accordance with information listed on the product insert.         Polymerization:       Will occur []       Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals       peroxides         to Avoid:       ammonia       peroxides         strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		-	
Polymerization:       Will occur [] Will not occur [X]         10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals         To Avoid:       ammonia         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		-	
10.4       Conditions To Avoid:       heat, flames and sparks         10.5       Incompatibility - Materials alkali metals         To Avoid:       ammonia         peroxides       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide	10.3		
10.5       Incompatibility - Materials alkali metals         To Avoid:       ammonia         peroxides       peroxides         strong oxidizing agents       strong oxidizing agents         10.6       Hazardous       carbon dioxide         Decomposition or       carbon monoxide		-	
To Avoid:     ammonia       peroxides       strong oxidizing agents       10.6     Hazardous       Decomposition or     carbon monoxide			
peroxides strong oxidizing agents 10.6 Hazardous carbon dioxide Decomposition or carbon monoxide	10.5		
10.6     Hazardous     carbon dioxide       Decomposition or     carbon monoxide		To Avoid:	
10.6     Hazardous     carbon dioxide       Decomposition or     carbon monoxide			
Decomposition or carbon monoxide			
	10.6		
Ryproducts:		-	carbon monoxide
Byproducis.		Byproducts:	



# SAFETY DATA SHEET Page: 5 of Deuterated Linoleic Acid Oxylipins LC-MS Mixture Revision: 02/25/2017

		0	A Table I i i i	1				
		Section 1	1. I oxicological	Informa	ation			
		The toxicological effects of this product have not been thoroughly studied. Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; Oral TDLO (man): 650 mg/kg; Oral LD50 (rat): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 10.5 ml/kg; Oral LD50 (rabbit): 6,300 mg/kg; Inhalation LC50 (rat): 20,000 ppm (10h); Inhalation TCLO (human): 1,800 ppm (30m); Inhalation TCLO (human): 2,500 mg/m3 (20m); Inhalation LC50 (rat): 5,900 mg/m3						
					nild; Skin (rabb	oit): 20 mg (24l	n) moderate;	
Effects:		Only select Regis See actual entry in Ethanol RTECS N	try of Toxic Effects of Ch n RTECS for complete in Jumber: KQ6300000	emical Sub formation.	stances (RTEC	-	sented here.	
				1	-	ACGIH	OSHA	
							n.a.	
							n.a.	
NA	13-OxoODE-d3			n.a.	n.a.	n.a.	n.a.	
NA	(±)12(13)-EpOME	E-d4					n.a.	
-17-5	Ethyl alcohol			n.a.	1	A4	n.a.	
Persiste Degrada Bioaccu Potentia Mobility Results assessm Other ac Waste D LAND T OT Prope	Ince and Ibility: Imulative II: In Soil: of PBT and vPvB Inent: Iverse effects: Ivisposal Method: IRANSPORT (US I Iver Shipping Name: Id Class:	Runoff from fire of No data available No data available No data available No data available No data available Section 1 Dispose in accord Section	ontrol or dilution water m	siderati	ONS egulations.	I		
	Chronic Effects: nogenicity # NA 08-39-2 NA NA -17-5 Toxicity Persiste Degrada Bioaccu Potentia Bioaccu Potentia Mobility Results assessn Other ac Waste D URAND T OT Prope OT Hazar	#       Hazardous Com         NA       (±)12(13)-DiHOM         08-39-2       13(S)-HODE-d4         NA       (±)12(13)-EpOME         -17-5       Ethyl alcohol         Toxicity:         Persistence and         Degradability:       Bioaccumulative         Potential:       Mobility in Soil:         Results of PBT and vPvB       assessment:         Other adverse effects:       Vaste Disposal Method:	Information on       The toxicological         Toxicological Effects:       Ethanol - Toxicity         (rabbit): 6,300 mg       ppm (30m); Inhala         (6h); Inhalation LG       Ethanol - Investig         Chronic Toxicological       Ethanol - Investig         Effects:       Only select Regiss         See actual entry i       Ethanol RTECS N         nogenicity:       NTP? No       IAI         #       Hazardous Components (Chemical         NA       (±)12(13)-DiHOME-d4       08-39-2         08-39-2       13(S)-HODE-d4       13-OxoODE-d3         NA       (±)12(13)-EpOME-d4       14         -17-5       Ethyl alcohol       Ethanol from fire of Runoff from	Information on The toxicological effects of this product ha Ethanol - Toxicity Data: Oral TDLO (man): (rat): 7,060 mg/kg; Oral LD50 (mouse): 3,4 (rabbit): 6,300 mg/kg; Inhalation LC50 (rat ppm (30m); Inhalation LCLO (mouse): 29,300 pp Ethanol - Irritation Data: Eyes (rabbit): 500 Chronic Toxicological Effects: Only select Registry of Toxic Effects of Ch See actual entry in RTECS for complete in Ethanol RTECS Number: KQ6300000 mogenicity: NTP? No IARC Monographs? No # Hazardous Components (Chemical Name) NA (±)12(13)-DiHOME-d4 08-39-2 13(S)-HODE-d4 13-OxoODE-d3 13(S)-HODE-d4 (±)12(13)-EpOME-d4 (±)12(13)-EpOME-d4 (±)12(13)-EpOME-d4 08-39-2 13(S)-HODE-d4 08-39-2 15(S) NO data available. 15(S) NO data	Information on       The toxicological effects of this product have not beer         Toxicological Effects:       Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; (rat): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; (rabbit): 6,300 mg/kg; Inhalation LC50 (rat): 20,000 pp ppm (30m); Inhalation TCLO (human): 2,500 mg/m3 (6h); Inhalation TCLO (muman): 2,500 mg/m3 (6h); Inhalation LCLO (mouse): 29,300 ppm (7h); Ethanol - Investigated as a mutagen, reproductive effects:         Only select Registry of Toxic Effects of Chemical Sub See actual entry in RTECS for complete information. Ethanol RTECS Number: KQ6300000         mogenicity:       NTP? No       IARC Monographs? No       OSHA Re         #       Hazardous Components (Chemical Name)       NTP         NA       (±)12(13)-DiHOME-d4       n.a.         NA       (±)21(3)-DiHOME-d4       n.a.         NA       (±)12(13)-EpOME-d4       n.a.         NA       (±)12(13)-EpOME-d4       n.a.         NA       (±)12(13)-EpOME-d4       n.a.         NA       (±)21(3)-EpOME-d4       n.a.         NA       (±)12(13)-EpOME-d4       n.a.         NA       (±)20(10)	Toxicological Effects:       Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; Oral TDLO (mark): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 2,000 ppm (10h); Inhalappm (30m); Inhalation TCLO (mouse): 29,300 mg/m3 (20m); Inhalation (Gh); Inhalation LCLO (mouse): 29,300 mg/m3 (20m); Inhalation (Gh); Inhalation LCLO (mouse): 29,300 mg/m3 (20m); Inhalation CCLO (mouse): 20,300 mg/m3 (20m); Inhalation CCLO (mouse): 20,300 mg/m3 (20m);	Information on Toxicological Effects:       The toxicological effects of this product have not been thoroughly studied.         Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; Oral TDLO (man): 650 mg/k (rat): 7.060 mg/kg; Oral LDS0 (mouse): 3.450 mg/kg; Oral LDS0 (mouse): 10.5 ml/l (rabbit): 6.300 mg/kg; Inhalation LCS0 (rat): 20.000 pm (10h); Inhalation TCLO (human): 2.500 mg/m (20m); Inhalation LCS0 (rat): (6h); Inhalation TCLO (human): 2.500 mg/m (20m); Inhalation LCS0 (rat): Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24m); Inhalation LCS0 (rat): Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24m); Mild; Skin (rabbit): 20 mg (24         Chronic Toxicological       Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24m); Mild; Skin (rabbit): 20 mg (24         Chronic Toxicological       Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24m); Mild; Skin (rabbit): 20 mg (24         Chronic Toxicological       Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24m); Mild; Skin (rabbit): 20 mg (24         Main Streeck       Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is pre See actual entry in RTECS for complete information. Ethanol RTECS Number: KQ6300000         mogenicity:       NTP? No       IARC MACGIH       n.a.       n.a.       n.a.         MA       (e)12(13)-EiD/ME-d4       n.a.       n.a.       n.a.       n.a.       n.a.         MA       (a)12-0x0ODE-d3       n.a.       n.a.       n.a.       n.a.       n.a.         NA       (a)12(13)-EiD/ME-d4       n.a.       n.a.	



# SAFETY DATA SHEET Page: 6 of Deuterated Linoleic Acid Oxylipins LC-MS Mixture Revision: 02/25/2017

14.1 LAND TRANSPORT (European ADR/RID):								
ADR/RID S	Shipping Name:	Ethyl Alcohol Solution						
UN Numbe	er:	1170 Packing Group: II			II			
Hazard Cla	ass:	3 - FLAMMABLE LIQUID						
14.3 AIR TRANSPORT (ICAO/IATA):								
	A Shipping Name:	Ethyl Alcohol Solution						
UN Numbe		1170	Packing Gro	up:	Ш			
Hazard Cla	ass:	3 - FLAMMABLE LIQUID	IATA Classif	-	3			
Additional Tra		Transport in accordance with local, state, and federal regulations.						
Information:	mepert	When sold in quantities of less		•	epted Quantity Code of			
E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.								
				-				
		Section 15. Regu	latory informa	ition				
EPA SARA (S	uperfund Amendn	nents and Reauthorization Act	of 1986) Lists					
CAS #	Hazardous Com	ponents (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)			
NA	(±)12(13)-DiHOM	/IE-d4	No	No	No			
139408-39-2	13(S)-HODE-d4		No	No	No			
NA	13-OxoODE-d3		No	No	No			
NA	(±)12(13)-EpOMI	F-d4	No	No	No			
64-17-5	Ethyl alcohol		No	No	No			
04-17-5								
CAS #	Hazardous Com	ponents (Chemical Name)	Other US EPA or	State Lists				
NA	(±)12(13)-DiHOM	/E-d4	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No					
139408-39-2	13(S)-HODE-d4	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No						
NA 13-OxoODE-d3		CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No						
NA	(±)12(13)-EpOM	E-d4 CAA HAP,ODC: No; CWA NPDES: No; TS PROP.65: No			; TSCA: No; CA			
64-17-5 Ethyl alcohol			CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No					
Regulatory Inf Statement:	ormation	This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.						
Section 16. Other Information								
Revision Date:	:	02/25/2017						
Additional Info	ormation About	No data available.						
This Product:								
			is believed to be acc	urate and represents	the best information			
		DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.						
Multi-region for								