ENVIRCLOGIX

QualiPlate[™] Kit for Cry1Ab/Cry1Ac

Highlights:

• Screen single corn, soy or cotton seed or leaf samples for the presence or absence of Cry1Ab or Cry1Ac

Contents of Kit:

- 12 strips of 8 antibody-coated wells, in plate frame
- Cry1Ab/Cry1Ac Positive Control
- Cry1Ab/Cry1Ac Enzyme Conjugate
- Substrate
- Stop Solution
- Wash Buffer Salt Packet

Note: To handle bulk packaged Cry1Ab/Cry1Ac Enzyme Conjugate and Substrate, pour off 5.5 milliliters of Conjugate and 11.5 mL Substrate per plate to be run each day. Use a multiple-channel pipette to dispense. Do not pour excess Substrate back into the reagent bottle.

Extraction Solutions Required but not provided

- Tween-20 this common lab supply is added to the Wash Buffer to create the extraction solution for corn leaf / seed, cotton leaf / seed, and soy leaf tissue
- GEC 20X this is added to wash buffer to create a seed extraction buffer for soy single seed (available through EnviroLogix, Part #11616 [1000 mL] or Part #12124 [500 mL])

Catalog Number AP 003 CRBS

Intended Use

The EnviroLogix QualiPlate Kit for Cry1Ab/Cry1Ac is designed for the non-quantitative laboratory detection of:

- Cry1Ab protein in Bt11, MON810 or Bt176 corn leaf tissue, or in Bt11 or MON810 corn seed samples;
- Cry1Ac protein in Bollgard[®], Bollgard II, or WideStrike[™] cotton leaf or seed samples.
- Cry1Ac protein in Intacta[®] Soy leaf or seed samples.

Note: This is a very sensitive test for Cry1Ab or Cry1Ac—at the customer's discretion, it may be utilized in quantitative applications, for corn and cotton leaf and seed only, with user-supplied calibrators.

How the Test Works

This EnviroLogix QualiPlate Kit is a "sandwich" Enzyme-Linked ImmunoSorbent Assay (ELISA). In the test, plant leaf or seed sample extracts are added to test wells coated with antibodies raised against Cry1Ab/Cry1Ac toxin. Any residues present in the sample extract bind to the antibodies, and are then detected by addition of enzyme (horseradish peroxidase)-labeled Cry1Ab/Cry1Ac antibody.

After a simple wash step, the results of the assay are visualized with a color development step; color development is proportional to Cry1Ab/Cry1Ac concentration in the sample extract.

Lighter color = Lower concentration Darker color = Higher concentration

Materials Not Provided

- disposable tip, adjustable air-displacement pipettes which will measure 50 and 100 microliters (µL), preferably of multi-channel style.
- marking pen (indelible)
- tape or Parafilm[®]
- timer
- microtiter plate reader
- wash bottle, or microtiter plate or strip washer
- orbital plate shaker (optional)
- Tween-20 (see note, left)
- GEC 20X (see note, left)
- Calibrators or Standards. This kit may be used in a quantitative fashion, for <u>corn</u> and <u>cotton</u> only, with user-supplied calibrators. For example, corn flour standards containing known percentages of Bt11- or MON810-expressing corn are available from the European Commission Joint Research Centre, Institute for Reference Materials and Measurements (Retieseweg, B-2440 Geel, Belgium), and can be used to calibrate this test for measurement of ground corn samples. In order for this to work, it is imperative that the samples be ground to the same consistency as the calibrators, and that both are extracted with the



Prepare wash buffer and extraction solutions



Punch leaf sample



Crush single seed



Remove unneeded strips

same extraction buffer, buffer-to-sample ratio, and extraction time. Alternatively, if the user can obtain pure Cry1Ab or Cry1Ac protein, the kit can be calibrated with these materials. In this instance, complete extraction of the protein from the sample is required to obtain the best estimate of the amount of Cry1 protein in the sample.

Preparation of Solutions

Wash Buffer: Add the contents of the packet of **Buffer Salts** (phosphate buffered saline, pH 7.4 - Tween 20) to 1 liter of distilled or de-ionized water, and stir to dissolve. Store refrigerated when not in use; warm to room temperature prior to assay.

Leaf extraction buffer: Add 0.5 mL Tween-20 to 100 mL of prepared Wash Buffer, and stir to dissolve. Store refrigerated when not in use; warm to room temperature prior to assay.

Seed extraction buffer for Cry1Ac cotton or Cry1Ab corn: Add 0.5 mL Tween-20 to 100 mL of prepared Wash Buffer, and stir to dissolve. Store refrigerated when not in use; warm to room temperature prior to assay.

Seed extraction buffer for Cry1Ac soybean: Dilute 20X GEC (Part #11616, 1000 mL or Part #12124, 500 mL), 50 mL/L and adjust pH to 9.6. Store refrigerated when not in use; warm to room temperature prior to assay.

Sample Preparation

Sample Extraction:

Sample extraction protocols are to be designed and validated by the individual users of this kit. The following suggestions are guidelines, and define the manner in which the kit is performance tested by the manufacturer.

- <u>Green leaf samples</u>: Extract green leaf samples that are 5-10 mm² in size with 250 µL of Extraction Buffer. The extraction efficiency will vary proportionately with the amount of tissue disruption and mixing performed. Use extreme caution to prevent sample-to-sample crosscontamination with plant tissue or exudate.
- 2. <u>Single seed samples</u>: Crush seed and extract each with 0.75 to 1 mL of Extraction Buffer. Mix thoroughly, then allow solids to settle before transferring extract to the assay plate.

How to Run the Assay

- Read all of these instructions before running the kit.
- Allow all reagents to reach room temperature before beginning (at least 30 minutes with un-boxed plates and reagents at room temperature do not remove plates from bag with desiccant until they have warmed up).
- Organize all reagents, sample extracts, and pipettes so that step 1 can be performed in 15 minutes or less. The use of a multichannel pipette is strongly recommended.
- If more than four strips are to be run at one time, the loading time will most likely exceed 15 minutes, and the use of a multi-channel pipette is recommended.
- If four or fewer strips are to be run, use a disposable-tip airdisplacement pipette and a clean pipette tip to add each Calibrator and diluted sample extract to the wells. Conjugate, Substrate, and Stop Solution may be added in the same manner; alternatively, use a repeating pipette for these three reagents.

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Mix plate



Strip Plate or Bottle Wash method



Complete protocol, then add Stop Solution



Read plates in a Plate Reader within 30 minutes of the addition of Stop Solution

- If fewer than all twelve strips are used, reseal the unneeded strips and the desiccant in the foil pouch provided, and refrigerate.
- Use the well identification markings on the plate edge to guide you when adding the samples and reagents. It is recommended that at least two wells each of Blank (Extraction Buffer) and Cry1Ab Positive Control be run on each plate. Additional quality control samples may be added at the discretion of the user. Sample extracts may be run in either single or duplicate wells. See example of typical assay setup, Figure 1A, on page 4.
- Add 50 μL of Cry1Ab/Cry1Ac Enzyme Conjugate to each well of the plate. Immediately follow with 50 μL of Extraction Buffer Blank, 50 μL of Cry1Ab Positive Control, and 50 μL of each sample extract to their respective wells. Follow this same order of addition for all reagents.

NOTE: It is strongly recommended that a multi-channel pipette be used in steps 1, 5, and 7.

- 2. Thoroughly mix the contents of the wells by moving the plate in a rapid circular motion on the bench top for a full 20-30 seconds. Be careful not to spill the contents!
- 3. Cover the wells with tape or Parafilm to prevent evaporation and incubate at ambient temperature for 1 to 2 hours (2 hours required for Cry1Ac soy). If an orbital plate shaker is available, shake plate at 200 rpm.

NOTE: Users shall determine appropriate incubation times to give the best results with the tissue disruption/extraction methods in use.

- 4. After incubation, carefully remove the covering and vigorously shake the contents of the wells into a sink or other suitable container. Flood the wells completely with Wash Buffer, then shake to empty. Repeat this wash step three times. Alternatively, perform these four washes $(300+\mu L/well)$ with a microtiter plate or strip washer. Slap the plate on a paper towel to remove as much water as possible.
- 5. Add $100 \ \mu L$ of **Substrate** to each well.
- 6. Thoroughly mix the contents of the wells, as in step 2. Cover the wells with new tape or Parafilm and incubate for 15 to 30 minutes at ambient temperature (30 minutes required for Cry1Ac soy). Use orbital shaker if available.

NOTE: Users shall determine appropriate incubation times to give the best results with the tissue disruption/extraction methods in use.

Caution: Stop Solution is 1.0N Hydrochloric acid. Handle carefully.

7. Add 100 μ L of Stop Solution to each well and mix thoroughly. This will turn the well contents yellow.

NOTE: Read the plate within 30 minutes of the addition of Stop Solution.

How to Interpret the Results

Spectrophotometric Measurement

1. Set the wavelength of your microtiter plate reader to 450 nanometers (nm). (If it has dual wavelength capability, use 600, 630 or 650 nm as the reference wavelength.)

2. Set the plate reader to blank on the Extraction Buffer **Blank** wells. If the reader cannot do this, measure and record the optical density (OD) of each well's contents, then subtract the average OD of the **Blank** wells from each of the readings.

Interpreting the Results

Compare the OD's of the sample extracts to those of the Positive Control to determine presence or absence of Cry1Ab/Cry1Ac endotoxin in your sample extract. Samples with absorbances close to that of the Blank wells (and less than that of the Positive Control wells) are presumed to be free of Bt endotoxin. Samples with absorbances significantly higher than those of the Blank wells are positive for Bt endotoxin content.

	1	2	3	4	5	6	7	8	9	10	11	12
Α	BL	S7	S15	S23	S31	S39	S47	S55	S63	S71	S79	S87
В	PC	S 8	S16	S24	S32	S40	S48	S56	S64	S72	S80	S88
С	S 1	S9	S17	S25	S33	S41	S49	S57	S65	S73	S81	S89
D	S 2	S10	S18	S26	S34	S42	S50	S58	S66	S74	S82	S90
Е	S 3	S11	S19	S27	S35	S43	S51	S59	S67	S75	S83	S91
F	S4	S12	S20	S28	S36	S44	S52	S60	S68	S76	S84	S92
G	S5	S13	S21	S29	S 37	S45	S53	S61	S69	S77	S85	BL
Н	S 6	S14	S22	S30	S38	S46	S54	S62	S70	S78	S86	PC

"BL" = Blank wells (Extraction Buffer)

"PC" = Cry1Ab Positive Control Wells

"S.." = sample extracts

Precautions and Notes

- Store all Kit components at 4°C to 8°C (39°F to 46°F) when not in use.
- Do not expose Kit components to temperatures greater than 37°C (99°F) or less than 2°C (36°F).
- Allow all reagents to reach ambient temperature (18°C to 27°C or 64°F to 81°F) before use.
- Do not use kit components after the expiration date.
- Do not use reagents or test plates from one Kit with reagents or test plates from a different Kit.
- **Do not expose Substrate to sunlight** during pipetting or while incubating in the test wells.
- Do not dilute or adulterate test reagents or use samples not called for in the test procedure.
- Cry1Ab and Cry1Ac proteins can be degraded by heat and sunlight. Take samples from green, actively growing leaves. Leaf samples that cannot be extracted immediately may be stored frozen for up to 1 week prior to analysis. Seeds may be stored for at least 6 months under cool, dry conditions.
- As with all tests, it is recommended that results be confirmed by an alternate method when necessary.
- Observe any applicable regulations when disposing of samples and kit reagents.



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LIMITED WARRANTY

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THIS WARRANTY IS EXCLUSIVE. The sole and exclusive obligation of EnviroLogix shall be to repair or replace the defective Products in the manner and for the period provided above. EnviroLogix shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, shall EnviroLogix be liable for incidental, special, or consequential damages.

This Limited Warranty states the entire obligation of EnviroLogix with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

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NVIRQLOGIX	Safety Data Sheet According to OSHA 29CFR 1910.1200	SECTION 5. Firefighting measures 5.1 Extinguishing media: Suitable extinguishing agents:	CO2, extinguishing powder or water spray. Fight larger fires with water spray or
ECTION 1. Identification of the substance	/mixture and of the company/undertaking	5.2 Special hazards arising from the substance o mixture:	alcohol resistant foam. ar Carbon oxides, Oxides of Phosphorous, Potassium, Sodium, Hydrogen Chloride ga
1 Product identifier Trade name: Part number:	Wash Baffer Salts 50-0091, 10099	5.2 Advice for firefighters:	Wear protective equipment appropriate for fire conditions including respiratory
2 Relevant identified uses of the substance or mixtuand uses advised against application of the substance	ire		protective gear
/ the preparation : 3 Details of the supplier of the safety data sheet	Laboratory chemicals	SECTION 6. Accidental release measures	
Manufacturer/Supplier:	EnviroLogix Inc., 500 Riverside Industrial Pkwy. Portland ME 04103, USA	6.1 Personal precautions, protective equipment	
4 Emergency telephone number:	(207) 797-0300 (207) 797-0300 Technical Service	and emergency procedures: 6.2 Environmental precautions:	Use PPE, avoid dust formation, ensure adequate ventilation, avoid breathing dust Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
ECTION 2. Hazards identification		6.3 Methods and material for containment and	Discharge to the environment must be avoided.
1 Classification of the Substance or Mixture: Classification according to OSHA 29CFR 1910.1 (Hazard Communication):	1200 Not a hazardous substance or mixture	clean up:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable closed containers for disposal
(Pazard Communication):	tvot a nazaroous suosance or mixture	6.4 Reference to other sections:	For safe handling refer to Section 7; For information on PPE refer to Section 8. For disposal, refer to Section 13.
2 Label Elements:	None required according to 29CFR 1910.1200	SECTION 7. Handling and storage	usponii, juite o oution 13.
Other indications	None	7.1 Precautions for safe handling:	Practice good chemical hygiene when handling. Avoid contact with eyes, skin and
Additional Information:	No other information	7.2 Conditions for safe storage, including any Incompatibilities:	clothing. Prevent formation of dust. Keep containers closed, store in a dry, well ventilated space.
		7.3 Specific end use(s):	Apart from the uses mentioned in section 1.2, no other end uses are stipulated.
ECTION 3. Composition/information on ing	gredients		n en en la construction de la const
2 Mixture: Powdered solid Synonyms: PBS		SECTION 8. Exposure controls/personal personal p	rotection
Hazardous Components	ame CAS No EC No Amount Classification	Components with workplace control Parameters:	Contains no substances with occupational exposure limit values
Potassium C	(%)	8.2 Exposure controls	
	Chronic 3; H412	8.2.1 Appropriate engineering controls:	Ensure eyewash and safety shower are nearby, provide ventilation if necessary
used on the amount of hazardous ingredients in this	product, it is not considered hazardous according to 29CFR 1910.1200	8.2.2 Personal Protective Equipment: Eyes	Safety glasses with side shields, goggles. Use equipment for eye protection tested and
ECTION 4. First aid measures			approved under appropriate government standards such as NIOSH (US) or EN 166 (E Eye and face pretection regulations are described by OSHA (US) in 29CFR1910.133, not ware contact lenses when working with chemicals
1 Description of first aid measures: After inhalation	Supply fresh air; consult doctor in case of breathing difficulties.	Hands	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal
After skin contact	Flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing. Seek medical attention if irritation develops.	000075	technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws
After swallowing	 Rinse opened eye for several minutes under running water. Seek medical attention if irritation develops. If swallowed, consult with medical staff or poison control center to determine if any 		and good laboratory practices. Wash and dry hands. The selected protective gloves ha to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374
	immediate response or follow up actions are recommended. Never give anything by mouth to an unconscious person.	Respiratory protection	derived from it. Appropriate respiratory protection should be determined according to local conditions
Most important symptoms and effects, both acute and delayed:	None	respinsor provide	using risk analysis protocols. An approved disposable air purifying particulate respira may be used as a backup to engineering controls. Always use respirators and compon
Indication of any immediate medical attention and special treatment needed:	No special treatment is required		tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
and special deathkin needed.	no special academics is required	Body	Use body protection relative to its type and amount of material being handled
		8.2.3 Environmental controls:	Sweep or wipe up spills, do not allow into sewers or drains
.1 Information on basic physical and	6	SECTION 13. Disposal considerations Dispose of excess or turned product in accordance	with Local, State and Federal regulations. Contact a licensed professional waste disposal
EXT TOXO & System and Given engagement A Information are basic physical and distribution properties: a) Appoint b) Odor:	White powder. None		with Local, State and Federal regulations. Contact a licensed professional waste disposal
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QualiPlate Kit for Cry1Ab/Cry1Ac Page 7 of 8

SECTION 1. Identification of the substan	nce/mixture and of	the company/undertaking	g			ion/informa	ation on ingr	edients		
1 Product identifier Trade name:	Stop Sol	ution		3.2	Mixture Aqueous solution 1	IN Hydrochle	orie Acid (IN	HCl, 3 % HCl)		
Synonyms: Part number	1.0 N HO	21 827, 10828, 11193, 11776 (XC	GD007)		Chemical name	Amount (%)	CAS No	Classification According to O	OSHA 29CFR 1910.1200	
2 Relevant identified uses of the substance or mixture and uses advised against applicatio of the substance / the preparation :	on	v chemicals			Hydrochloric acid	1-4%	EC No	Hazard Classification	Hazard Code	
of the substance / the preparation : 3 Details of the supplier of the safety data she Manufacturer/Supplier:	rt		ial Pkwy.		and a second		7647-01-0	May be Corrosive to Metals	H290	
	Portland 3 Phone: (2)	gix Inc., 500 Riverside Industri ME 04103, USA 07) 797-0300					231-595-7	Causes Skin Imitation	H315	
4 Emergency telephone number:		-0300 Technical Service						Causes Serious Eye Damage	H318	
ECTION 2. Hazards identification										
I Classification of the substance or mixture Classification according to OSHA 29 CFR 19	Skin Irrit	arrosive (Cat. 1) H290 tation (Cat. 2) H315								
2 Label elements Labeling according to OSHA 29CFR 1910.12		Eye damage (Cat. 1) H318		4.1 De	TON 4. First aid a scription of first aid					
Labeling according to OSHA 29CFR 1910.12					ter inhalation : ter skin contact :			In case of inhalation. Remove to fresh air, respiration. Get medical attention immedi In case of skin contact. Remove contamina Wash affected area with mild scop or deter	 If not breathing give artificia iately. 	al Aliantesis
Hazard pictograms :	A. C.	>		Ar	ter skin contact :			In case of skin contact. Remove contamina Wash affected area with mild scap or deter evidence of chemical remains.	ated clothing and shoes immed orgent for at least 10 minutes o	natery. r until n
	\sim			Af	ter eye contact :			In case of eye contact, immediately flush e minutes. Lifting eyelids occasionally, unti	eyes with plenty of water for a til no evidence of chemical ren	t least 1 nains C
Signal word :	Warning							medical attention immediately. In case of ingestion DO NOT Induce you	niting unless directed to do so	hv
Hazard statements:	H315 C	lay be corrosive to metals auses skin irritation		Af	ter swallowing :			medical personnel. Never give anything t a physician immediately.	by mouth to an unconscious po	erson. C
Precautionary statements:	H318 Ca	uses serious eye damage		4.2 M	ost important symptod d delayed:	oms and effe	ects, both acute			
	P281 P302 + F P305 - P	P352 IF ON SKIN: Was	ective equipment as required sh with plenty of soap and water.	4.3 In	dication of any imme	ediate medic	al attention an			
	P505+P	351+P338 IF IN EYES: Rins minutes. Remove Continue rinsing.	se cautiously with water for several contact lenses if present and easy to do.	sp	ecial treatment need	ed:		DO NOT use sodium bicarbonate in an att	tempt to neutralize the acid.	
3 Other Statements	None			SEC	IION 5. Firefighti	ng measure	8			
				10070200	tinguishing media:			CO2, extinguishing powder or water spray. Figh resistant foam.	ht larger fires with water spray	or alco
				5.2 Sp mi	ecial hazards arisin; xture:	g from the si	ubstance or	Hydrogen Chloride gas		
				5.3 Ad	lvice for firefighters			Wear protective gear appropriate for fire condit	tions including respiratory pro	tective
		Revision : 13 April, 2015		5 SD5						
	Abooth in name				TION 9. Physical : nformation on basic	physical and				
cleanup:	oxide.	towel and discard in appropriat	ste waste. Clean with water afterwards. utens of sodium carbenste or calcium	9.1 I	nformation on basic chemical propertie Appearance:	physical and	d C1	ear liquid, colorless to slight yellow.		
-3 Methods and material for containment and elennup: 4 References to other wetlons:	oxide.	towel and discard in appropriat be neutralized with dilute solu g refer to Section 7. For inform		SEC 9.11 31 0 0	nformation on basic chemical propertie Appearance: Odor: Odor: Odor Threshold:	physical and	d Cl Pu No	ear liquid, colotless to slight yellow. argent (slight) 5 Data Available		
cleanup:	oxide. For safe handling	towel and discard in appropriat be neutralized with dilute solu g refer to Section 7. For inform	ste waste. Clean with water afterwards. utens of sodium carbenste or calcium	5120 9.11 9.1 0 0 0	nformation on basic chemical propertie Appearance: Odor: Odor Threshold: pH:	physical and s:	d CI Pu No pF	car liquid, colorless to slight yellow. ngcrif (slight) Data Available 1 Data Available		
cleanup: 4 References to other sections: ECTION 7. Handling and storage	oxide. For safe handling disposal refer to	towel and discard in appropriate be neutralized with dilute solu grefer to Section 7. For inform Section 13	ite waste. Clean with water afterwards, utions of sodium carbonate or calcium nation on PPE refer to Section 8. For	SEC 9.11 9.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	nformation on basic chemical propertie Appearance: Odor: Odor Threshold pH: Melting point/Beiling Flash point/ Evaporation rate:	physical and s: g point: range:	d Cl Pu No pF No No No O	ear liquid, colorless to slight yellow, meert (slight) > Data Available 1 Jo Data Available, y applicable, do (Water) commarch with n-Burd Acetate = 1		
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teamp:	oide. Fee aich anding disposal refer to Practice good che cholma. Store in publy ch availaght and han. Apart from the us scatterion Hydrogen Chloride Pachties using the generation of the scatterion Pachties using the generation of the scatterion Pachties using the generation of the scatterion Safety quantum the scatterion of the scatterion Safety quantum the provide scatterion of the scatterion Safety quantum the scatterion Safety quantum the provide scatterion of the scatterion Safety quantum the provide scatterion of the scatterion Safety quantum the scat	towel and discard in appropriat be neutralized with dilute solu grafer to Section 7. For inform Section 13 mical logicine when handling osed, non-metal container, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a store well aired storage neo es marticular discontainer, in a store well well aired storage neo- tro and the store of the store of the in aired stored be rappeded properties government standard interest when working with char as cloves much be impeded pri- metal govers when working with char as. Cloves much be impeded primate the protective SN4086 CEC on Stabulacy to engineering controls.	te wade. Clau with water afterwords attens of sodium carbenate or calcium nation on PPE refer to Section 8. For Avoid contact with eyes, skin, and a corrosive compatible area. Prevent direct ms. o other specific uses are sipulated USA (OSHA) Calling Limit = 5 ppm (7.5 mg/m3) with an eyewash and safety shower. Use mc concentrations below permissible with an eyewash and safety shower. Use the origin of eye protection tosted and do such as NIOSH (US) or EN 166 (ED), a track of the origin of the origin of the origin with an eyewash and safety shower. Use the origin of the origin of the origin of the origin of do such as NIOSH (US) or EN 166 (ED), and by OSHA (US) or EN 166 (ED), areads and shin contact with this product origine with applicable laws and good origine with applicable laws and good origine with applicable laws and good and the standard EN 374 derived from it. termined according to local conditions in a share you for you brist and temporare	Stee 311 31 30 30 30 30 30 30 30 30 30 30	demantia on basic demanta of poperture Applications: Control and Control and Control philo Melting point floating philoso	ploy deal and s s g point: range and reaction and reactio	4 Provide a series of the seri	or liquid, coloriest to slight yellow. The rest of apply 1 Data Available 1 Data	s ardous reactions will not occur zardous decompositions produc sardous decompositions produc species rabbit rab pg t rab pg t rab	ccts show
eteamp: References to other sections: CETION 7. Handling and storage Precautions for safe kandling: (Conditions for safe storage, including any incompatibilities: Sectific end use(s): CETION 8. Exposure controls/spectrum Cemponents with limit values that require monitoring at the workplace: Exposure Centrols: 8.2.1 Engineering controls 8.2.2 General protective and hygienic measures: Eye Protection: Hand Protections: Breathing Equipment:	oide. Fee aich anding disposal refer to Practice good che cholma. Store in publy ch availaght and han. Apart from the us scatterion Hydrogen Chloride Pachties using the generation of the scatterion Pachties using the generation of the scatterion Pachties using the generation of the scatterion Safety quantum the scatterion of the scatterion Safety quantum the provide scatterion of the scatterion Safety quantum the scatterion Safety quantum the provide scatterion of the scatterion Safety quantum the provide scatterion of the scatterion Safety quantum the scat	towel and discard in appropriat be neutralized with dilute solu grafer to Section 7. For inform Section 13 mical logicine when handling osed, non-metal container, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a Store in well aired storage neo es marticular discontainer, in a store well aired storage neo es marticular discontainer, in a store well well aired storage neo- tro and the store of the store of the in aired stored be rappeded properties government standard interest when working with char as cloves much be impeded pri- metal govers when working with char as. Cloves much be impeded primate the protective SN4086 CEC on Stabulacy to engineering controls.	te wade. Clau with water afterwords attens of sodium carbenate or calcium nation on PPE refer to Section 8. For Avoid contact with eyes, skin, and a corrosive compatible area. Prevent direct ms. o other specific uses are sipulated USA (OSHA) Calling Limit = 5 ppm (7.5 mg/m3) with an eyewash and safety shower. Use mc concentrations below permissible with an eyewash and safety shower. Use the origin of eye protection tosted and do such as NIOSH (US) or EN 166 (ED), a track of the origin of the origin of the origin with an eyewash and safety shower. Use the origin of the origin of the origin of the origin of do such as NIOSH (US) or EN 166 (ED), and by OSHA (US) or EN 166 (ED), areads and shin contact with this product origine with applicable laws and good origine with applicable laws and good origine with applicable laws and good and the standard EN 374 derived from it. termined according to local conditions in a share you for you brist and temporare	Stee 311 31 30 30 30 30 30 30 30 30 30 30	demandia on basic demanda properties Appenties: Control and the second properties of the second	ploy deal and s s g point: range and reaction and reactio	4 Vity Vity Vity Vity Vity Vity Vity Vity	or liquid, coloriest to slight yellow. report slight, 10 bink Available 11 Data Available 12 Data Available 13 Data Available 14 Data Available 14 Data Available 15 Data Available 16 Data Available 17 G47.41.4 HCL 17 G47.41.4 HCL 18 General toxicity 10.105 Pailoung 10.105 Pailoung	s ardous reactions will not occur zardous decompositions produc sardous decompositions produc species rabbit rab pg t rab pg t rab	es

QualiPlate Kit for Cry1Ab/Cry1Ac Page 8 of 8

12.2 Persistence and degradability :	No Data Available		SECTION 16. Other information		
	No Data Available		This information is true based on our present know	ledge. However, EnviroLogix	makes no representation of its accuracy or completene.
	No Data Available		use. This document shall not constitute a guarantee	wir independent judgment in a e for any specific product feati	determining the product's safety and suitability for its in ures and shall not establish a legally valid contractual
	Not available as a chemical safety assessment, not required/not conducted.		relationship EHS Department		
	No Data Available		EnviroLogix Inc.		
12.6 Other adverse effects:	No Data Available		Codes: H290 May be Corrosive to Metals	P281	Use Personnel Protective equipment as Required
SECTION 13. Disposal considerations			H315 Causes Skin Irritation H318 Causes Serious Eye Damage		IF ON SKIN: Wash with plenty of soap and water IF IN EYES: Rinse cautiously with water for several
Waste treatment methods:	Contact a licensed professional waste disposal service to dispose of this material Disposal of surplus or waste solutions must be in accordance with applicable and national laws and regulations.				minutes. Remove contact lenses if present and easy to Continue rinsing.
SECTION 14. Transport information 14.1 UN-Number DOT, ADR, ADN, IMDG, IATA :	UN1789				
 UN-Number DOT, ADR, ADN, IMDG, IATA UN proper shipping name DOT, ADR, ADN, I 					
 14.3 Transport hazard class(es) DOT, ADR, ADN, 14.4 Packing group (DOT, ADR, IMDG, IATA): 	IMDG, IATA): 8 III				
14.5 Environmental hazards	Not hazardous to the environment.				
14.6 Special precautions for user : 14.7 Transport in bulk according to Anney II of M	None				
14.6 Special precautions for user : 14.7 Transport in bulk according to Annex II of M and the IBC code: SECTION 15. Regulatory information					
14.7 Transport in bulk according to Annex II of M and the IBC code: SECTION 15. Regulatory information 15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture	ARPOL73/78				
14.7 Transport in bulk according to Annex II of M and the IBC code: SECUTION 15. Republicary information TS3 Safety, Insulth and environmental regulation/regulation specific for the US Podera Regulations TSCA.	ARPOL73/78 No information available.				
14.7 Transport in bulk according to Annex II of M and the IBC code: <u>SECTION 15. Regulatory information</u> TES Safety, health and environmental regulationogeliation specific for the use of the second second second second TESA Health and Safety Reporting List Chemical Test Rela	ARPOL7378 No information available.				
14.7 Transport in Julk according to Annex II of M and the IBC code: SECTION 15. Regulatory information 15.5 Safety, health and environmental regulations/regislation specific for the 15.7 Iodenta Headman State Paradiana Safety Reporting List Chemical Tost Kale SARA Section 202 (Distrandy Hazardous	ARPOL73/78 No information available: CAS# 7617-01-0 is not hated on the TSCA inventory. None listed.				
14.7 Transport in bulk according to Annex II of M and the IBC code: SECTION 15. Regulatory information 15.1 Safety, health and environmental regulations/registation specific for the unbatance or muture 18.1 Federal Regulations Thealth and Safety Reporting List Chemical Test Rule CERCLA SARA Section 302 (Estientedy Hazardous Clearn Art Act	AKPOL7378 No information available: CAS# 7617-01-0 is not hated on the TSCA inventory. None instead None under a Chemical Test Rule. CAS# 7617-01-02 S00 In TRU, CAS# 7617-01-02. Sixida as a heardness air pollutant (HAP).				
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