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SDS PN: 102-338-300




1. Product and company identification				
1.1 Product identifier				
Product name	Nanobind tissue kit RT			
Product number(s)	102-208-000			
Other means of identification	This product is a kit box containing 8 reagent tubes.			
	<i>Component name</i>	<i>Part #</i>	<i>#</i>	<i>Cap color</i>
	Proteinase K (PK)	102-276-600	1	yellow
	Buffer SB	102-280-400	1	Pink
	Buffer EB	102-277-100	1	clear
	Buffer BL3	102-276-800	1	clear
	Buffer CLE3	102-280-500	1	clear
	Nanobind disks	102-276-500	1	clear
	Buffer CW1	102-276-900	1	clear
	Buffer CW2	102-277-000	1	clear
1.2 Relevant identified uses of the substance or mixture and uses advised against				
Identified use	This kit is used with Nanobind tissue kit 4C (102-208-100) to complete HMW DNA extraction from animal tissues (24 reactions)			
Restrictions on use	Research use only.			
1.3 Details of the supplier of the substance or mixture				
Supplier name and address	Pacific Biosciences of California, Inc. 1305 O'Brien Drive Menlo Park, CA 94025 USA https://www.pacb.com			
Supplier phone	+1.650.521.8000			
1.4 Emergency telephone number				
Within USA and Canada	Call CHEMTREC 1-800-424-9300 (reference CCN# 656805)			
Outside USA and Canada	techsupport@pacb.com			
2. Hazard(s) identification				
2.1 Classification of the substance or mixture				
The kit contains hazardous substances. ¹ Each component is classified as follows.				
Proteinase K (PK)	102-276-600	Skin irritation (category 3), Respiratory sensitizer (category 1)		
Buffer SB	102-280-400	Not a hazardous material.		
Buffer EB	102-277-100	Not a hazardous material.		
Buffer BL3	102-276-800	Acute toxicity, oral (category 4), Acute toxicity, inhalation (category 4), Skin irritation (category 2), Eye irritation (category 2A), Acute aquatic toxicity (category 3)		

¹ Classification in accordance with 29CFR1910 (OSHA HCS) and UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Buffer CLE3	102-280-500	Skin irritation (category 3), Eye irritation (category 2), Acute aquatic toxicity (category 3).
Nanobind disks	102-276-500	Not a hazardous material.
Buffer CW1	102-276-900	Skin irritation (category 3), Acute aquatic toxicity (category 3), Chronic aquatic toxicity (category 3)
Buffer CW2	102-277-000	Not a hazardous material.

2.2 GHS label elements and precautionary statements

Information is provided for the hazardous components listed in section 2.1

<i>Component</i>	<i>Pictogram</i>	<i>Signal word</i>	<i>Hazard statement(s)</i>	<i>Precautionary statement(s)</i>
Proteinase K (PK)		Danger	<ul style="list-style-type: none"> Causes mild skin irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. 	<ul style="list-style-type: none"> If skin irritation occurs, get medical attention. Avoid breathing mist, vapors, or spray. In case of inadequate ventilation, wear respiratory protection. If inhaled, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms, get emergency medical help immediately. Dispose of contents and container in accordance with local regulations.
Buffer BL3		Warning	<ul style="list-style-type: none"> Harmful if swallowed. Harmful if inhaled. Causes serious eye irritation. Causes skin irritation Harmful to aquatic life. 	<ul style="list-style-type: none"> Do not eat, drink, or smoke when using this product. Use in well-ventilated area. Wear protective gloves and eye protection. Avoid breathing mist, vapors, or spray. Wash hands thoroughly after handling. If swallowed, rinse mouth and call poison center or doctor if you feel unwell. If inhaled, remove person to fresh air and keep comfortable for breathing. Call poison center or doctor if you feel unwell. If on skin, wash with plenty of water. If skin irritation occurs, get medical attention. If in eye, rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice. Take off contaminated clothing and wash before reuse. Dispose of contents and container in accordance with local regulations.
Buffer CLE3		Warning	<ul style="list-style-type: none"> Causes serious eye irritation. Causes mild skin irritation. Harmful to aquatic life. 	<ul style="list-style-type: none"> Wash hands thoroughly after handling. If in eye, rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice. Dispose of contents and container in accordance with local regulations.
Buffer CW1	None	Warning	<ul style="list-style-type: none"> Causes mild skin irritation. Harmful to aquatic life Harmful to aquatic life with long lasting effects 	<ul style="list-style-type: none"> If skin irritation occurs, get medical attention. Avoid release to the environment. Dispose of contents and container in accordance with local regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS				
Proteinase K is of biological origin. It is produced by the fungus <i>Tritirachium album</i> Limber.				
3. Composition / information on ingredients				
3.1 Substances				
Common name and synonyms			Nanobind tissue kit RT	
CAS number			None	
Other unique identifiers			None	
3.2 Hazardous components				
The following hazardous ingredients are present.				
<i>Component</i>	<i>Hazardous ingredient(s)</i>	<i>CAS</i>	<i>GHS classification</i>	<i>Concentration (wt%)</i>
Proteinase K (PK)	Proteinase K	39450-01-6	Eye irritation (category 2), Skin irritation (category 2A), Respiratory sensitizer (category 1), Specific target organ toxicity – single exposure (category 3)	2%
Buffer BL3	Guanidine hydrochloride	50-01-1	Acute Toxicity, oral (category 4), Acute toxicity, inhalation (category 4), Skin irritation (category 2), Eye irritation (category 2A), Acute aquatic toxicity (category 3)	76%
Buffer CLE3	Trade secret	Trade secret	Acute Toxicity, oral (category 4), Acute toxicity, inhalation (category 4), Skin irritation (category 2), Serious eye damage (category 1), Specific target organ toxicity, respiratory – single exposure (category 3), Acute aquatic toxicity (category 2), Chronic aquatic toxicity (category 3)	2.9%
Buffer CW1	Guanidine hydrochloride	50-01-1	Acute Toxicity, oral (category 4), Acute toxicity, inhalation (category 4), Skin irritation (category 2), Eye irritation (category 2A), Acute aquatic toxicity (category 3)	7%
Buffer CW1	Trade secret	Trade secret	Acute Toxicity, oral (category 4), Skin irritation (category 2), Serious eye damage (category 1), Acute aquatic toxicity (category 1), Chronic aquatic toxicity (category 1)	0.75%
4. First aid measures				
4.1 Description of first aid measures				
General advice	Consult a physician. Show this safety data sheet to the physician. Follow the general practices listed for all components and specific practices as noted.			
If inhaled	If breathed in, move person into fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. <ul style="list-style-type: none"> PK: If experiencing respiratory symptoms, get emergency medical help immediately. BL3: Call poison center or doctor if you feel unwell. 			
In case of skin contact	Wash off with water. <ul style="list-style-type: none"> PK: If skin irritation occurs, get medical attention. BL3: Wash with plenty of water. If skin irritation occurs, get medical attention CW1: If skin irritation occurs, get medical attention. 			
In case of eye contact	Flush eyes with water. <ul style="list-style-type: none"> CLE3: If in eye, rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice. BL3: If in eye, rinse cautiously for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice. 			
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. <ul style="list-style-type: none"> BL3: If swallowed, rinse mouth and call poison center or doctor if you feel unwell. 			
4.2 Most important symptoms/effects, both acute and delayed				
No data available. Refer to section 2.2 and section 11 for additional information.				

4.2	Indication of any immediate medical attention and special treatment needed	
	No data available	
5.	Fire-fighting measures	
5.1	Suitable extinguishing media	
	Dry chemical, carbon dioxide, foam, or water.	
5.2	Special hazards arising from the substance or mixture	
	Combustion will produce oxides of carbon and nitrogen. Fire may produce irritating gas. Runoff may pollute waterways.	
5.3	Advice for firefighters (special protective equipment or precautions)	
	Wear self-contained breathing apparatus for fire-fighting as necessary.	
6.	Accidental release measures	
6.1	Personal precautions, protective equipment and emergency procedures	
	Avoid breathing vapors, mists, or gas. For personal protection see section 8.0.	
6.2	Environmental precautions	
	Avoid release to the environment. Report spills and releases as required to appropriate authorities.	
6.3	Methods and materials for cleanup	
	Wear personal protective equipment, wipe up with paper towel (or similar), and contain in closed containers.	
6.4	Reference to other sections	
	For disposal see section 13.	
7.	Handling and storage	
7.1	Precautions for safe handling	
	For all components, utilize standard good lab practices, use in a well-ventilated area, and wear standard PPE (gloves, labcoat, safety glasses). In addition to the general practices, follow specific practices as noted. <ul style="list-style-type: none"> • PK: Avoid breathing mist, vapors, or spray. In case of inadequate ventilation, wear respiratory protection. • CLE3: Wash hands thoroughly after handling. • BL3: Do not eat, drink, or smoke when using this product. Avoid breathing mist, vapors, or spray. Wash hands thoroughly after handling. 	
7.2	Conditions for safe storage, including any incompatibilities	
	Keep containers tightly closed at the recommended storage temperature.	
8.	Exposure controls / personal protection	
8.1	Control parameters	
	Contains no substances with occupational exposure limit values.	
8.2	Exposure controls	
	Appropriate engineering and administrative controls: General industrial hygiene practice. No special ventilation required for normal use. <ul style="list-style-type: none"> • BL3: Take off contaminate clothing and wash before reuse. 	
	Personal protective equipment (PPE):	
	Eye/face protection	Safety glasses
	Skin and body protection	Latex or nitrile gloves; lab coat /apron
	Respiratory protection	None required
9.	Physical and chemical properties	
9.1	Information on basic physical and chemical properties	
	Appearance	Each reagent tube contains clear colorless liquid. BL3 may appear slightly yellowish.
	Odor	No odor
	Odor threshold	No data available

pH	7.5-9
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limit	No data available
Vapor pressure	No data available
Relative density	No data available
Solubility(ies)	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
10. Stability and reactivity	
Reactivity	This product is not reactive under normal conditions of storage and use.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	No data available
Incompatible materials	Avoid contact with strong acids, bases and oxidizers.
Hazardous decomposition products	No data available. In the event of fire see section 5.
11. Toxicological information	
11.1 Information on likely routes of exposure	
The most likely route of exposure is via skin or eye contact. Exposure via inhalation or ingestion is less likely.	
11.2 Symptoms related to the physical, chemical and toxicological characteristics	
No data available	
11.3 Delayed and immediate effects and also chronic effects from short-and long-term exposure	
Eyes	No data available
Skin	No data available
Inhalation	No data available
Ingestion	No data available
Chronic effects	No data available
Aggravated medical conditions	No data available
Interactions with other chemicals	No data available
11.4 Numerical measures of toxicity (include calculated values?)	
Acute toxicity	No data available
Skin corrosion/irritation	No data available
Serious eye damage/irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity	No data available
11.5 Carcinogenicity	
No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP or OSHA.	

12. Ecological information	
Ecotoxicity	No data available
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	None Required
Other adverse effects	No data available
13. Disposal considerations	
Dispose all waste in accordance with local, regional and national regulations.	
Product	See above.
Contaminated packaging	See above.
US EPA waste number	No EPA waste numbers apply. Not regulated as a US federal hazardous waste. May be regulated under individual state laws.
14. Transport information	
Transportation of this product is not regulated under ICAO, IMDG or US DOT.	
15. Regulatory information	
15.1 USA federal regulations	
SARA 302	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313	This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.
SARA 311/312	PK: Respiratory Sensitizer. CLE3: Eye irritation. BL3: Acute toxicity (oral), Acute toxicity (inhalation), Eye irritation, Skin irritation.
TSCA	Research use only
15.2 USA state regulations	
CA Prop 65	This kit does not contain any chemicals known to the state of California to cause cancer or adverse reproductive health effects
16. Other information	
Prepared by	Pacific Biosciences of California, Inc. Environment, Health and Safety 1305 O'Brien Drive Menlo Park, CA 94025 USA safety@pacb.com
Further information	The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. It is not a warranty or quality specification. This information relates only to the specific material designated and may not be valid for use in combination with any other material or in any other process. Research use only. Not for use in diagnostic procedures. ©2022, Pacific Biosciences of California, Inc. ("PacBio"). All rights reserved. Information in this document is subject to change without notice. PacBio assumes no responsibility for any errors or omissions in this document. Certain notices, terms, conditions and/or use restrictions may pertain to your use of PacBio products and/or third party products. Refer to the applicable PacBio terms and conditions of sale and to the applicable license terms at pacb.com/license . Pacific Biosciences, the PacBio logo, PacBio, Circulomics, Omniome, SMRT, SMRTbell, Iso-Seq, Sequel, Nanobind, and SBB are trademarks of PacBio. All other trademarks are the sole property of their respective owners.