ImmunoChemistry TECHNOLOGIES LLC

SAFETY DATA SHEET (SDS)

according to Regulation (EC) No. 830/2015 amending 1907/2006

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1	**Product identifier:**		ABTS 1-Component HRP Microwell Substrate
1.1a	Other means of identification:		.
1.1b		Alternative product name(s)/ synonyms:	SUBA, SUB4
1.1c		Product number/Catalog #(s):	3327, 6278
1.1d		Internal identification:	SUBA, SUB4
1.2	**Relevant identified uses of the substance or mixture and uses advised against:**		For research use only. Not for use in diagnostic procedures.
1.2a	Brief description of what the substance or mixture is intended to do:		For laboratory use.
1.3	**Details of the supplier of the SDS:**		.
1.3a		Name:	ImmunoChemistry Technologies, LLC (ICT)
1.3b		Address:	9401 James Avenue South, Suite 155
1.3c		City, State, Zip, Country	Bloomington, MN 55431-2500 USA
1.3d		Phone number:	1-800-829-3194 and 952-888-8788
1.3e		Fax number:	952-888-8988
1.3f		Website:	www.immunochemistry.com
1.3g		Email:	help@immunochemistry.com
1.3h		Contact person at ICT:	Quality Documentation Department
1.4	**Emergency telephone number:**		ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide; ICT hours are 9 am-5 pm central time USA, Monday through Friday (excluding holidays). Chemtrec 24-hour access within USA and Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.

Section 2: Hazards identification

2.1	**Classification of the substance or mixture:**		.
2.1a	Product is a:		Mixture.
2.1b	Classification according to (EC) No. 1272/2008 {CLP}:		Not classified.
2.1c	The most important adverse physiochemical, human health, and environmental effects:		Refer to Sections 9-12.
2.2	**Label elements:**		.
2.2a	GHS label elements, including precautionary statements:		.
2.2b		Contains:	.
2.2c	Labeling in accordance with (EC) No. 1272/2008:		.
2.2d	Hazard Pictograms (Hazard Symbols):		None.
2.2e	Signal word:		None.
2.2f	Hazard statements:		None.
2.2g	Precautionary statements:		None.
2.2h	Supplementary precaution statements:		None.
2.3	**Other hazards:**		No additional information available.
2.3a	Does the chemical meet the criteria for PBT or vPvB?		Not applicable.
2.3b	Other hazards which do not result in classification:		None under normal conditions.

Section 3: Composition/information on ingredients

3.1	**Substance:**	Item is a mixture therefore Section 3.1 is not applicable; see Section 3.2.
3.2	**Mixture:** The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels:	Item is a mixture. Contains no hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 4: First aid measures

4.1	**Description of first aid measures:**	If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. Never give anything by mouth to an unconscious person.
4.1a	Inhalation:	Remove to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, obtain medical attention.
4.1b	Skin contact:	Remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation persists, call a physician.

4.1c	Eye contact:	Immediately flush with plenty of water for at least 15 minutes. Obtain medical attention if pain, blinking or redness persist.
4.1d	Ingestion:	Do not induce vomiting. Get medical advice/attention if you feel unwell.
4.2	**Most important symptoms and effects, both acute and delayed:**	Not expected to present a significant hazard under anticipated conditions of normal use. No data available on chronic symptoms.
4.2a	Inhalation:	May cause respiratory irritation.
4.2b	Skin contact:	May cause skin irritation.
4.2c	Eye contact:	May cause slight temporary irritation.
4.2d	Ingestion:	May cause gastrointestinal irritation.
4.3	**Indication of any immediate medical attention and special treatment needed:**	No additional information available.
4.3a	Notes to physician/first responder:	Treat symptomatically.

Section 5: Firefighting measures

5.1	**Extinguishing media:**	Use fire-extinguishing media appropriate for surrounding materials.
5.1a	Suitable extinguishing media:	Foam. Carbon dioxide. Dry powder. Water spray. Sand.
5.1b	Unsuitable extinguishing media:	Not known.
5.2	**Special hazards arising from the substance or mixture:**	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use.
5.2a	Hazardous combustion products:	Toxic gases and vapors may be released if involved in a fire.
5.2b	Unusual fire & explosion hazards:	No unusual fire or explosion hazards noted.
5.2c	Protective measures in fire:	Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing apparatus and protective suit (see Section 8).
5.3	**Advice for firefighters:**	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.3a	Special firefighting procedures:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.
5.3b	Special protective equipment and precautions for firefighters:	Do not enter fire area without proper protective equipment, including respiratory protection. Wear self-contained breathing appartus and protective suit (see Section 8).

Section 6: Accidental release measures

6.1	**Personal precautions, protective equipment, and emergency procedures:**	.
6.1a	General release measures:	No specific emergency measures are required other than good laboratory hygiene and safety practices.
6.1b	Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:	Wear protective equipment as described in Section 8. Evacuate unnecessary personnel.
6.1c	Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.
6.2	**Environmental precautions:**	Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.
6.3	**Methods and materials for containment and clean up:**	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).
6.4	**Reference to other sections:**	Refer to Sections 8 and 13 for additional information.

Section 7: Handling and storage

7.1	**Precautions for safe handling:**	Do not handle until all safety precautions have been read and understood. Use appropriate personal protection equipment (PPE). Keep away from sources of ignition.
7.1a	Prevent handling of incompatible substances or mixtures:	Not known.
7.1b	Advice on general occupational hygiene:	No smoking. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
7.2	**Conditions for safe storage, including any incompatibilities:**	Keep the container tightly closed. Store in a dry, cool and well-ventilated place. Store away from light. Avoid elevated temperatures. Storage temperature: 2-8°C.
7.3	**Specific end use(s):**	For research use only. Not for use in diagnostic procedures.

Section 8: Exposure controls/personal protection

8.1	**Control parameters:**	.
8.1a	Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure	No data available.

	limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin.	
8.1b	Appropriate engineering controls:	Ensure adequate ventilation, especially in confined areas.
8.1c	Individual protection measures, such as personal protective equipment:	Wear gloves. Wear protective goggles. Wear labcoat with full coverage clothing.
8.1d	Safety symbols:	
8.2	**Exposure controls:**	.
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Local exhaust ventilation is recommended for providing adequate ventilation. Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.2c	Ventilation controls:	Provide adequate ventilation.
8.2d	Reference to other sections:	Refer to Section 5 for additional information.
8.2e	Eye/face protection:	Chemical goggles or safety glasses.
8.2f	Skin protection:	Wear suitable protective clothing. Wear long sleeves.
8.2g	Hand protection:	Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl.
8.2h	Respiratory equipment:	Where excessive vapor, mist, or dust may result, use NIOSH approved respiratory protection equipment.
8.2i	Other protection:	Wear appropriate clothing to prevent any possibility of skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated.
8.2k	Thermal hazards:	None known.
8.2l	Environmental exposure controls:	Not determined.
Section 9: Physical and chemical properties		
9.1	**Information on basic physical and chemical properties:**	.
9.1a	Appearance (physical state, color, etc.):	Clear, light green, liquid
9.1b	Odor:	No specific data.
9.1c	Odor threshold:	No data available.
9.1d	pH:	3.8-4.2
9.1e	Melting point/freezing point (˚C):	No data available.
9.1f	Initial boiling point and boiling range:	No data available.
9.1g	Flash point (˚C):	No data available.
9.1h	Evaporation rate:	No data available.
9.1i	Flammability (solid, gas):	Not flammable.
9.1j	Upper/lower flammability or explosive limits:	Product is not explosive.
9.1k	Vapor pressure:	No data available.
9.1l	Vapor density (Air =1):	No data available.
9.1m	Relative density:	1.01 (H_2O = 1.0)
9.1n	Solubility(ies):	Water: 100%
9.1o	Partition coefficient (N-octanol/water):	No data available.
9.1p	Auto-ignition temperature (˚C):	No data available.
9.1q	Decomposition temperature (˚C):	No data available.
9.1r	Viscosity:	No data available.
9.1s	Explosive properties:	Not explosive.
9.1t	Oxidizing properties:	Not an oxidizer.
9.2	**Other information:**	No additional information available.
9.2a	Other physical or chemical parameters:	No additional information available.
Section 10: Stability and reactivity		
10.1	**Reactivity:**	No dangerous reactions known under normal conditions of use.
10.2	**Chemical stability:**	Stable under recommended handling and storage conditions (see Section 7).
10.3	**Possibility of hazardous reactions:**	None known.
10.4	**Conditions to avoid:**	Light. Elevated temperatures. Moisture.
10.5	**Incompatible materials:**	Strong oxidizing agents. Some metals.
10.6	**Hazardous decomposition products:**	Hazardous fumes of nitrous oxides (NOx) and carbon oxides.

Section 11: Toxicological information		
11.1	**Information on toxicological effects:**	.
11.1a	Name:	ABTS 1-Component HRP Microwell Substrate
11.1b	Acute toxicity:	Not classified.
11.1c	Skin corrosion/irritation:	Not classified. pH: 3.8-4.2
11.1d	Serious eye damage/irritation:	Not classified. pH: 3.8-4.2
11.1e	Respiratory or skin sensitization:	Not classified.
11.1f	Germ cell mutagenicity:	Not classified.
11.1g	Carcinogenicity:	Not classified.
11.1h	Reproductive toxicity:	Not classified.
11.1i	STOT-single exposure:	Not classified.
11.1j	STOT-repeated exposure:	Not classified.
11.1k	Aspiration hazard:	Not classified.
11.1l	Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	.
11.1m	Ingestion:	May cause gastrointestinal irritation.
11.1n	Inhalation:	May cause respiratory irritation.
11.1o	Skin contact:	May cause skin irritation.
11.1p	Eye contact:	May cause slight temporary irritation.
11.1q	Symptoms related to the physical, chemical and toxicological characteristics:	No specific symptoms noted.
11.1r	Delayed and immediate effects as well as chronic effects from short and long term exposure:	Not determined.
11.1s	Numerical measures of toxicity (such as acute toxicity estimates):	Not determined.
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
11.1v	Mixtures:	See Section 3 for any substances in the mixture
11.1w	Mixture vs. substance information:	See Section 3 for any substances in the mixture
11.1x	Classification by National Toxicity Program (NTP):	Not classified.
11.1y	Classification by International Agency for Research on Cancer (IARC):	Not classified.
11.1z	Classification by OSHA 13:	Not classified.
11.1ab	Other information:	None.
Section 12: Ecological information		
12.1	**Toxicity:**	.
12.1a	Name:	ABTS 1-Component HRP Microwell Substrate.
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	No information available.
12.2	**Persistence and degradability:**	No information available.
12.3	**Bioaccumulative potential:**	No information available.
12.4	**Mobility in soil:**	No information available.
12.5	**Results of PBT and vPvB assessment:**	No information available.
12.6	**Other adverse effects:**	No data available.
Section 13: Disposal considerations		
13.1	**Waste treatment methods:**	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
13.1a	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Observe all federal, state and local laws when considering most appropriate disposal method. Contact a licensed professional waste disposal service to dispose of this material. Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.
Section 14: Transport information		
14.1	**UN number:**	Not applicable.
14.2	**UN proper shipping name:**	Not applicable.
14.3	**Transport hazard class(es):**	Not hazardous for transport.
14.4	**Packing group:**	Not applicable.
14.5	**Environmental hazards:**	.
14.5a	Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	No.
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
14.6	**Special precautions for user:**	None.
14.7	**Transport in bulk according to Annex II of MARPOL and the IBC code:**	Not applicable.

14.7a	Other information:	None.
14.7b	Classification for other modes of transport:	Not classified.
Section 15: Regulatory information		
15.1	**Safety, health and environmental regulations/legislation specific for the substance or mixture:**	.
15.1a	Regional safety, health and environmental regulations specific for the product in question:	All chemical substances in this product are listed in the EPA (Environmental Protection Agency) TSCA (Toxic Substances Control Act) Inventory. Canada: No additional information available.
15.1b	USA SARA Components (such as 302/311/313):	This product is not listed in the SARA (Superfund Amendments and Reauthorization Act).
15.1c	USA Massachusetts Right to Know:	No components are subject to the Massachusetts Right to Know Act.
15.1d	USA Pennsylvania Right to Know:	No components are subject to the USA Pennsylvania Right to Know list.
15.1e	USA New Jersey Right to Know:	No components are subject to the USA New Jersey Right to Know list.
15.1f	USA California Prop. 65 Components:	This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.
15.1g	EU Regulation 1907/2006 {REACH}:	The product nor any components are identified.
15.1h	Annex XIV substances subject to authorization:	The product nor any components are identified.
15.1i	Substances of very high concern:	The product nor any components are identified.
15.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
15.1l	EU legislation references:	(EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures {CLP Regulation}. EC 453/2010. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
15.2	**Chemical safety assessment:**	Not required.
15.2a	Other regulatory information:	None.
Section 16: Other information		
16.1	**Other information:**	.
16.1a	Date of revision:	04/02/19
16.1b	SDS number and revision:	F17-3327-2-C
16.1c	Supersedes SDS number and revision:	F17-3327-2-B
16.1d	Changes made to the previous version of the SDS:	Reviewed and updated document control numbers.
16.1e	Key/legend to abbreviations and acronyms used in the SDS:	ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway. ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road. CAS Chemical Abstracts Service. CLP Classification, Labelling and Packaging. EC European Commission. EC50 Half maximal effective concentration. EH40 Resource containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations. EINECS European Inventory of Existing Commercial chemical Substances. ELINCS European List of Notified Chemical Substances. EU European Union. GHS Globally Harmonized System of Classification and Labelling of Chemicals. H Statement GHS Hazard statement. IATA International Air Transport Association. IBC Intermediate Bulk Container. IC50 Half maximal inhibitory concentration. IMDG International Maritime Dangerous Goods. LC50 Median lethal concentration. LD50 Median lethal dose. LogPow logarithm of the octanol/water partition coefficient. MARPOL 73/78 International Convention for the Prevention of Pollution From Ships, 1973 as modified by theProtocol of 1978. OEL Occupational Exposure Limit. OSHA Occupational Safety and Health Administration (USA).

		PBT Persistent, Bioaccumulative, and Toxic. RID The Regulations concerning the International Carriage of Dangerous Goods by Rail. SARA Superfund Amendments and Reauthorization Act. SCBA Self-Contained Breathing Apparatus. SDS Safety Data Sheet. STOT Specific Target Organ Toxicity. STOT-RE Specific Target Organ Toxicity - Repeated Exposure. STOT-SE Specific Target Organ Toxicity - Single Exposure. UN United Nations. USA United States of America. vPvB very Persistent very Bioaccumulative.
16.1f	Full text of hazard statements and/or precautionary statements not written out in full elsewhere:	All statements were written out in full.
DISCLAIMER:	**This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.**	

END OF SDS