

Safety Data Sheet



Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • Cell Capture Beads and Reagents

Synonyms • Buffer W; Buffer WS; Cell Capture Beads

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Antibody dilution and cell washing

Use(s) advised against • This product is not intended for use in humans or animals.

1.3 Details of the supplier of the safety data sheet

Manufacturer • NanoString Technologies
530 Fairview Avenue North
Seattle, WA 98109
United States
www.nanostring.com
operations@nanostring.com

Telephone (General) • 206.378.NANO (6266)

1.4 Emergency telephone number

Manufacturer • 206.378.NANO (6266)

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

CLP • Not classified

2.2 Label Elements

CLP
Hazard statements • No label element(s) required

2.3 Other Hazards

CLP • According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

UN GHS Revision 3

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Third Revised Edition

2.1 Classification of the substance or mixture

- UN GHS
- Not classified

2.2 Label elements

UN GHS

- Hazard statements** • No label element(s) required

Precautionary statements

2.3 Other hazards

- UN GHS
- According to the Globally Harmonized System for Classification and Labeling (GHS) this product is not considered hazardous
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United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012
- Not classified

2.2 Label elements

OSHA HCS 2012

- Hazard statements** • No label element(s) required

2.3 Other hazards

- OSHA HCS 2012
- This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.
-

Canada

According to: WHMIS 2015

2.1 Classification of the substance or mixture

- WHMIS 2015
- Not classified

2.2 Label elements

WHMIS 2015

- Hazard statements** • No label element(s) required

Precautionary statements

2.3 Other hazards

- WHMIS 2015
- In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).
-

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Component A	NDA	> 98%	NDA	EU CLP: Not Classified UN GHS Revision 3: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Component D	NDA	< 1%	NDA	EU CLP: Not Classified UN GHS Revision 3: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Component B	CAS:9011-18-1	< 1%	Ingestion/Oral-Rat LD50 • 20600 mg/kg	EU CLP: Not Classified UN GHS Revision 3: Not Classified OSHA HCS 2012: Not Classified WHMIS 2015: Not Classified	NDA
Hydrogen peroxide	CAS:7722-84-1 EC Number:231-765-0 EU Index:008-003-00-9	<= 0.1%	Ingestion/Oral-Rat LD50 • 376 mg/kg Inhalation-Rat LC50 • 2000 mg/m ³	EU CLP: Annex VI, Table 3.1: Ox. Liq. 1, H271; Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Corr. 1A, H314; STOT SE 3: Resp. Irrit., H335 UN GHS Revision 3: Ox. Liq. 1; Acute Tox. 4 (Oral); Acute Tox. 5 (Skin); Acute Tox. 4 (Inhl); Skin Corr. 1A; Eye Dam. 1; STOT SE 3: Resp. Irrit.; Aquatic Acute 2 OSHA HCS 2012: Ox. Liq. 1; Acute Tox. 4 (Oral); Acute Tox. 4 (Inhl); Skin Corr. 1A; Eye Dam. 1; STOT SE 3: Resp. Irrit. WHMIS 2015: Ox. Liq. 1; Acute Tox. 4 (Oral); Acute Tox. 4 (Inhl); Skin Corr. 1A; Eye Dam. 1; STOT SE 3: Resp. Irrit.	NDA
Component C		< 0.02%		EU CLP: Union workplace exposure limit OSHA HCS 2012: Exposure limit	NDA
Sodium azide	CAS:26628-22-8 EC Number:247-852-1 EU Index:011-004-00-7	< 0.001%	Ingestion/Oral-Rat LD50 • 27 mg/kg Inhalation-Rat LC50 • 37 mg/m ³ Skin-Rabbit LD50 • 20 mg/kg	EU CLP: Union workplace exposure limit OSHA HCS 2012: Exposure limit	NDA

See Section 16 for full text of H-statements.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin

- In case of contact with substance, immediately flush skin with running water for at least 20 minutes.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.

Ingestion

- If swallowed, rinse mouth with water (only if the person is conscious) If large quantities are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the

patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

- Suitable Extinguishing Media**
- LARGE FIRE: Water spray, fog or regular foam.
SMALL FIRES: Dry chemical, CO₂, water spray or regular foam.
- Unsuitable Extinguishing Media**
- No data available.

5.2 Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- Some may burn but none ignite readily.
- Hazardous Combustion Products**
- No data available.

5.3 Advice for firefighters

- Move containers from fire area if you can do it without risk.
Wear positive pressure self-contained breathing apparatus (SCBA).
Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.
Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Ventilate enclosed areas. Do not walk through spilled material. Use appropriate Personal Protective Equipment (PPE)
- Emergency Procedures**
- Keep unauthorized personnel away. Stay upwind.

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Stop leak if you can do it without risk.
SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

- Handling**
- Handle in accordance with good industrial hygiene and safety practice. Wear recommended Personal Protective Equipment when handling.

7.2 Conditions for safe storage, including any incompatibilities

- Storage**
- Keep container tightly closed and store at recommended temperature.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Sodium azide (26628-22-8)	Ceilings	0.29 mg/m ³ Ceiling (as Sodium azide); 0.11 ppm Ceiling (as Hydrazoic acid vapor)	0.1 ppm Ceiling (as HN ₃); 0.3 mg/m ³ Ceiling (as NaN ₃)	Not established
Hydrogen peroxide (7722-84-1)	TWAs	1 ppm TWA	1 ppm TWA; 1.4 mg/m ³ TWA	1 ppm TWA; 1.4 mg/m ³ TWA

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Skin/Body

- Wear appropriate gloves.

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Odorless liquid.
Color	Data lacking	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Soluble 100 %
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking

Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Incompatible materials.

10.5 Incompatible materials

- Strong oxidizing agents.

10.6 Hazardous decomposition products

- Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon oxides.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

		Components
Hydrogen peroxide (<= 0.1%)	7722-84-1	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 376 mg/kg; <i>Gastrointestinal:Peritonitis</i>; <i>Blood:Pigmented or nucleated red blood cells</i>; <i>Blood:Changes in leucocyte (WBC) count</i>; Ingestion/Oral-Man LDLo • 1429 mg/kg; <i>Behavioral:Coma</i>; <i>Gastrointestinal:Change in structure or function of esophagus</i>; <i>Gastrointestinal:Nausea or vomiting</i>; Ingestion/Oral-Woman LDLo • 2626 µg/kg; <i>Behavioral:Coma</i>; <i>Lungs, Thorax, or Respiration:Cyanosis</i>; <i>Gastrointestinal:Nausea or vomiting</i>; Ingestion/Oral-Man TDLo • 1.429 mL/kg; <i>Brain and Coverings:Changes in circulation (Hemorrhage, thrombosis, etc.)</i>; <i>Peripheral Nerve and Sensation:Flaccid paralysis with appropriate anesthesia</i>; <i>Vascular:Acute arterial occlusion</i>; Skin-Rat LD50 • 3 g/kg;</p> <p>Multi-dose Toxicity: Ingestion/Oral-Rabbit TDLo • 8.75 mg/kg 25 Week(s)-Continuous; <i>Endocrine:Effect on menstrual cycle</i>; <i>Reproductive Effects:Paternal Effects:Spermatogenesis</i>; <i>Nutritional and Gross Metabolic:Gross Metabolite Changes:Weight loss or decreased weight gain</i>; Ingestion/Oral-Rat TDLo • 8.75 mg/kg 25 Week(s)-Continuous; <i>Endocrine:Effect on menstrual cycle</i>; <i>Reproductive Effects:Paternal Effects:Spermatogenesis</i>; <i>Nutritional and Gross Metabolic:Gross Metabolite Changes:Weight loss or decreased weight gain</i>;</p> <p>Tumorigen / Carcinogen: Ingestion/Oral-Mouse • 168 g/kg 30 Week(s)-Continuous; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria</i>; <i>Gastrointestinal:Tumors</i>; Ingestion/Oral-Mouse TDLo • 144 g/kg 26 Week(s)-Continuous; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria</i>; <i>Gastrointestinal:Tumors</i>; Skin-Mouse TDLo • 4032 mg/kg 18 Week(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria</i>; <i>Skin and Appendages:Other:Tumors</i>; <i>Tumorigenic:Facilitates action of known carcinogen</i></p>
Component B (< 1%)	9011-18-1	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 20600 mg/kg; <i>Behavioral:Somnolence (general depressed activity)</i>; <i>Behavioral:Ataxia</i>; <i>Gastrointestinal:Hypermotility, diarrhea</i>;</p> <p>Mutagen: Micronucleus test • Ingestion/Oral-Mouse • 84 g/kg 14 Day(s)-Intermittent</p>

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Skin sensitization	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Carcinogenicity	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
STOT-SE	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking
STOT-RE	EU/CLP • Data lacking UN GHS 3 • Data lacking OSHA HCS 2012 • Data lacking WHMIS 2015 • Data lacking

Potential Health Effects

Inhalation

Acute (Immediate)

- Under normal conditions of use, no health effects are expected.

- Chronic (Delayed)**
- No data available.
- Skin**
- Acute (Immediate)**
- Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)**
- No data available.
- Eye**
- Acute (Immediate)**
- Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)**
- No data available.
- Ingestion**
- Acute (Immediate)**
- Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)**
- No data available.

Key to abbreviations

LD = Lethal Dose

Section 12 - Ecological Information

12.1 Toxicity

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

- Product waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
- Packaging waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
TDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

IMO/IMDG	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA
IATA/ICAO	Not Applicable	Not Regulated	Not Applicable	Not Applicable	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code • Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

State Right To Know				
Component	CAS	MA	NJ	PA
Component B	9011-18-1	No	No	No
Hydrogen peroxide	7722-84-1	Yes	Yes	Yes
Sodium azide	26628-22-8	Yes	Yes	Yes
Component C	151-21-3	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Component B	9011-18-1	Yes	No	No	No	Yes
Hydrogen peroxide	7722-84-1	Yes	No	Yes	No	Yes
Sodium azide	26628-22-8	Yes	No	Yes	No	Yes
Component C	151-21-3	Yes	No	Yes	No	Yes

Canada

Labor

Canada - WHMIS 1988 - Classifications of Substances

• Hydrogen peroxide	7722-84-1	C, D2B, E (20%, 25%, 30%); C, D1B, E, F (including 35%, 40%, 50%, 65%, 70%, 75%, 80%, 85%, 90%, 95%); C, D2B (9%, 10%, 15%)
• Sodium azide	26628-22-8	D1A
• Component C	151-21-3	D2B
• Component B	9011-18-1	Not Listed

Canada - WHMIS 1988 - Ingredient Disclosure List

• Hydrogen peroxide	7722-84-1	1 %
• Sodium azide	26628-22-8	1 %
• Component C	151-21-3	1 %
• Component B	9011-18-1	Not Listed

Environment

Canada - CEPA - Priority Substances List

• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Hydrogen peroxide	7722-84-1	7500 lb TQ (>=52% by weight)
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	1000 lb final RQ; 454 kg final RQ
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Hydrogen peroxide	7722-84-1	1000 lb EPCRA RQ (concentration >52%)
• Sodium azide	26628-22-8	1000 lb EPCRA RQ
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Hydrogen peroxide	7722-84-1	1000 lb TPQ (concentration >52%) 500 lb TPQ (this material is a reactive solid, the TPQ does not default to 10000 pounds for non-powder, non-molten, non-solution form)
• Sodium azide	26628-22-8	
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	1.0 % de minimis concentration
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

United States - California

Environment		
U.S. - California - Proposition 65 - Carcinogens List		
• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity		
• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Hydrogen peroxide	7722-84-1	Not Listed
• Sodium azide	26628-22-8	Not Listed
• Component C	151-21-3	Not Listed
• Component B	9011-18-1	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H271 - May cause fire or explosion; strong oxidizer
- H302 - Harmful if swallowed
- H314 - Causes severe skin burns and eye damage.
- H332 - Harmful if inhaled
- H335 - May cause respiratory irritation

Revision Date

- 01/March/2019

Preparation Date

- 01/March/2019

Disclaimer/Statement of Liability

- The information herein is given in good faith but no warranty, expressed or implied, is made.

Key to abbreviations

NDA = No Data Available