



SAFETY DATA SHEET
LINEAR ALKYL BENZENESULFONIC ACIDS
REVISION 5, DATE 06 JUN 19

1. IDENTIFICATION

Product Name	Linear alkyl benzenesulfonic acids
Other Names	LABSA; LAS
Uses	Detergent, emulsifier.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Benzenesulfonic acid, C10-16-alkyl derivatives
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887



2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Schedule 6



Globally Harmonised System

Hazard Classification		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
Hazard Categories		Corrosive to Metals - Category 1 Acute Toxicity (Oral) - Category 4 Skin Corrosion/Irritation - Category 1B Serious Eye Damage/Irritation - Category 1	
Pictograms		 	
Signal Word		Danger	
Hazard Statements		H290	May be corrosive to metals.
		H302	Harmful if swallowed.
		H314	Causes severe skin burns and eye damage.
Precautionary Statements	Prevention	P260	Do not breathe mist/vapour/spray.
		P280	Wear protective gloves/protective clothing/eye protection/face protection.
		P270	Do not eat, drink or smoke when using this product.
		P273	Avoid release to the environment.
	Response	P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
		P310	Immediately call a POISON CENTER or doctor.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P390	Absorb spillage to prevent material-damage.
		P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
		P363	Wash contaminated clothing before reuse.
		P304 + P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.
	Storage	P406	Store in corrosive resistant container with a resistant inner liner.
		P405	Store locked up.
	Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
---------------------------------------	---

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Benzenesulfonic acid, C10-16-alkyl derivatives	Unspecified	68584-22-5	>=96 %
Benzene, C10-13-alkyl derivatives	Unspecified	67774-74-7	<=2 %
Sulphuric acid	H2SO4	7664-93-9	<=2 %
Water	H2O	7732-18-5	<=2 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. If vomiting occurs, rinse mouth and keep head lower than hips to help prevent aspiration. Obtain immediate medical care. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice. Obtain immediate medical care.
Skin	IF ON SKIN: Remove contaminated clothing and shoes immediately. Flush skin with running water for at least 15 minutes; Wash with plenty of soap and water. For minor skin contact, avoid spreading material on unaffected skin. Immediately call a Poison Centre or doctor/physician for advice. Wash contaminated clothing and shoes before reuse.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing - Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device. Administer oxygen if breathing is difficult. Obtain immediate medical care.
Advice to Doctor	Treat symptomatically - Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of identity and nature of product(s) involved, and take precautions to protect themselves.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Avoid getting water inside containers.
Flammability Conditions	Combustible; May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for extinction - Do not use water jets.
Fire and Explosion Hazard	Containers may explode when heated. When heated, vapours may form explosive mixtures with air. Contact with metals may evolve flammable hydrogen gas.
Hazardous Products of Combustion	Fire will produce irritating, toxic and/or corrosive gases, including oxides of Carbon, oxides of Sulphur.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may be toxic and/or corrosive and pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for this material.
Flash Point	>150 °C
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	2X

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Do not breathe vapours; Prevent contact with eyes, skin and clothing.
Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to suitable container for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Large spill: Dike for later disposal.
Decontamination	No information available.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground (vapours can accumulate in low areas). Large spill: Consider initial downwind evacuation of areas within at least 250 m; Immediately contact Police or Fire Brigade.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8). Large spill: Wear self-contained breathing apparatus (SCBA) and chemical splash suit.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation - Open only under well-ventilated conditions. Loosen closure cautiously before opening. Handle with care and in accordance with good industrial hygiene and safety practice. Do not breathe mist/vapours/spray; Prevent contact with eyes, skin and clothing. Wear protective gloves/protective clothing/eye protection/face protection; Wear respiratory protection if there is a risk of exposure to high vapour concentrations or spray mist (see SECTION 8). Keep away from heat and sources of ignition - No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Absorb spillage to prevent material damage (see SECTION 6).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10). Store locked up.
Container	Keep only in the original container or store in a corrosive resistant container with a resistant inner liner.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For COMPONENT: Sulphuric acid (CAS No. 7664-93-9): - Safe Work Australia Exposure Standard: TWA = 1 mg/m ³ ; STEL = 3 mg/m ³ . - New Zealand WES: TWA = 1 mg/m ³ ; Confirmed carcinogen (6.7A); Currently under review.
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible, particularly in confined spaces. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use explosion-proof electrical/ventilating/lighting equipment.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection if there is a risk of exposure to high vapour concentrations or spray mist. Recommended filter type: E/P (acid gas/particulate). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles or face-shield. - Hand protection: Wear protective gloves. Recommended: Chemical-resistant gloves. - Skin/body protection: Wear appropriate personal protective clothing to prevent skin contact. Recommended: Chemical-resistant clothing.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove contaminated clothing and shoes immediately and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Viscous liquid
Odour	No information available.
Colour	Amber
pH	<2
Vapour Pressure	0.513 mmHg (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	>50 °C
Melting Point	<-10 °C
Freezing Point	<-10 °C
Solubility	7.098 mg/l
Specific Gravity	1.05 - 1.06
Flash Point	>150 °C
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	322 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	log Kow = 2
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible; May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire will produce irritating, toxic and/or corrosive gases, including oxides of Carbon, oxides of Sulphur.
Release of Invisible Flammable Vapours and Gases	When heated, vapours may form explosive mixtures with air. Contact with metals may evolve flammable hydrogen gas.

10. STABILITY AND REACTIVITY

General Information	May be corrosive to metals.
Chemical Stability	This material is stable under recommended storage and handling conditions.
Conditions to Avoid	Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with strong oxidising agents, strong alkalis, metals.
Hazardous Decomposition Products	Fire will produce irritating, toxic and/or corrosive gases, including oxides of Carbon, oxides of Sulphur. Contact with metals may evolve flammable hydrogen gas.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none"> - Acute toxicity: Harmful if swallowed. Causes digestive tract burns. May be harmful in contact with skin. - Skin corrosion/irritation: Causes severe skin burns; Corrosive to skin. - Eye damage/irritation: Causes serious eye damage; Corrosive to eyes. - Respiratory/skin sensitisation: Non-sensitising [GPMT]. - Germ cell mutagenicity: No information available. - Carcinogenicity: No information available. - Reproductive toxicity: No information available. - STOT (single exposure): May cause irritation to the respiratory system. - STOT (repeated exposure): Not information available. - Aspiration toxicity: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat: 500 - 2,000 mg/kg
Other	Acute toxicity (Dermal): - LD50, Rabbit: >2,000 mg/kg
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (Oncorhynchus mykiss): 3 mg/l (96 h). - EC50, Crustacea (Daphnia magna): 2.9 mg/l (48 h). - EC50, Algae: 170 mg/l (96 h).
Persistence/Degradability	Readily biodegradable.
Mobility	No information available.
Environmental Fate	Toxic to aquatic life - Avoid release to the environment.
Bioaccumulation Potential	Low potential for bioaccumulation.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available

Land Transport (Canada)

TDG Regulations

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available

Land Transport (Fiji)

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	2586
Hazchem	2X

SAFETY DATA SHEET LINEAR ALKYL BENZENESULFONIC ACIDS REVISION 5, DATE 06 JUN 19

Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available

Land Transport (Papua New Guinea)

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
ERG	153 Substances - Toxic and/or Corrosive (Combustible)
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-B
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	2586
Hazchem	2X
Pack Group	III
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
---------------------------------------	---

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Schedule 6

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	Additives Process Chemicals and Raw Materials Corrosive Group Standard 2020 HSR002491 *HSR003163 (Revoked)
----------------------	---

National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined

Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes

DOBENC1000, DOBENC1100, DOBENZ0100, DOBENZ1000, DOBENZ1001, DOBENZ1002, DOBENZ1003, DOBENZ1005, DOBENZ1006, DOBENZ1007, DOBENZ1008, DOBENZ1009, DOBENZ1010, DOBENZ1011, DOBENZ1012, DOBENZ1013, DOBENZ1014, DOBENZ1015, DOBENZ1016, DOBENZ1019, DOBENZ1021, DOBENZ1500, DOBENZ1501, DOBENZ1800, DOBENZ1801, DOBENZ1802, DOBENZ1803, DOBENZ1804, DOBENZ1805, DOBENZ1806, DOBENZ1807, DOBENZ1808, DOBENZ1809, DOBENZ1810, DOBENZ1811, DOBENZ1812, DOBENZ1813, DOBENZ1814, DOBENZ1815, DOBENZ1816, DOBENZ1817, DOBENZ1818, DOBENZ1819, DOBENZ1820, DOBENZ1821, DOBENZ1900, DOBENZ2010, DOBENZ2012, DOBENZ2017, DOBENZ2100, DOBENZ2101, DOBENZ2102, DOBENZ2103, DOBENZ2105, DOBENZ2108, DOBENZ2110, DOBENZ22500, DOBENZ22501, DOBENZ22600, DOBENZ3000, DOBENZ3010, DOBENZ3020, DOBENZ3030, DOBENZ3031, DOBENZ3040, DOBENZ3300, DOBENZ3400, DOBENZ3500, DOBENZ3600, DOBENZ4000, DOBENZ4100, DOBENZ4101, DOBENZ4110, DOBENZ5000, DOBENZ5100, DOBENZ5200, DOBENZ5201, DOBENZ5300, DOBENZ5310, DOBENZ5500, DOBENZ5600, DOBENZ6001, DOBENZ6002, DOBENZ6200, DOBENZ6300, DOBENZ6500, DOBENZ6600, DOBENZ6700, DOBENZ6800, DOBENZ6801, DOBENZ6802, DOBENZ6803, DOBENZ6804, DOBENZ6811, DOBENZ6900, DOBENZ7000, DOBENZ7010, DOBENZ7011, DOBENZ7100, DOBENZ7200, DOBENZ7700, DOBENZ7800, DOBENZ8000, DOBENZ8001, DOBENZ8002, DOBENZ8003, DOBENZ8004, DOBENZ8005, DOBENZ8006, DOBENZ8007, DOBENZ8008, DOBENZ8009, DOBENZ8010, DOBENZ8011, DOBENZ8012, DOBENZ8013, DOBENZ8014, DOBENZ8015, DOBENZ8016, DOBENZ8017, DOBENZ8018, DOBENZ8019, DOBENZ8020, DOBENZ8021, DOBENZ8022, DOBENZ8023, DOBENZ8024, DOBENZ8025, DOBENZ8026, DOBENZ8027, DOBENZ8200, DOBENZ8210, DOBENZ8211, DOBENZ8500, DOBENZ8700, DOBENZ9000, DOBENZ9100, DOBENZ9101, DOBENZ9701, DOBENZ9702, DOBENZ9703, DOBENZ9704, DOBENZ9705, DOBENZ9706, DOBENZ9707, DOBENZ9708, DOBENZ9709

Revision

5

Revision Date

06 Jun 2019

Key/Legend

< Less Than

> Greater Than

AICS Australian Inventory of Chemical Substances**atm** Atmosphere**CAS** Chemical Abstracts Service (Registry Number)**cm²** Square Centimetres**CO₂** Carbon Dioxide**COD** Chemical Oxygen Demand**deg C (°C)** Degrees Celcius**EPA (New Zealand)** Environmental Protection Authority of New Zealand**deg F (°F)** Degrees Farenheit**g** Grams**g/cm³** Grams per Cubic Centimetre**g/l** Grams per Litre**HSNO** Hazardous Substance and New Organism**IDLH** Immediately Dangerous to Life and Health**immiscible** Liquids are insoluable in each other.**inHg** Inch of Mercury**inH₂O** Inch of Water**K** Kelvin**kg** Kilogram**kg/m³** Kilograms per Cubic Metre**lb** Pound**LC50** LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.**LD50** LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.**ltr or L** Litre

m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Health and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight