MATERIAL SAFETY DATA SHEET

SECTION 1 — PRODUCT IDENTIFICATION

Product identifier: **BB5 NATURAL**

Product use: A Liquid Acidifier Buffer with Natural pH Color Indicator.

Supplier name and address:
NutriAg Ltd.
39 Gail Grove
Toronto, Ontario, Canada
M9M 1M5

Manufacturer's name and address:
Refer to Supplier

Emergency Telephone #: 613-996-6666 (Canutec)

WHMIS information: Class E

SECTION 2 — CHEMICAL COMPOSITION/HAZARDOUS INGREDIENTS

Principal Functioning Agents:	
Phosphoric Acid, Polyols and pH Indicator	74%
Constituents Ineffective as Spray Adjuvant:	
Inerts	26%
Total	100%

SECTION 3 — PHYSICAL AND CHEMICAL PROPERTIES

Physical form, colour and odour: Red liquid, no odour.
Odour threshold: N/Av
Specific gravity (water = 1): 1.23
Melting/freezing point: N/Av
Vapour density (Air=1): N/Av
Coefficient of oil/water distribution: N/Av
Percent Volatile by Weight: N/Av
pH (1% w/v solution): 1.82
Boiling point: N/Av
Vapour pressure: N/Av
Solubility in water: 100%.
Volatile organic compounds (VOC's): N/Av
Evaporation rate: N/Av

SECTION 4 — FIRE AND EXPLOSION DATA

Fire hazards/conditions of flammability: Non-combustible. Product may release flammable hydrogen gas on contact with metals, which may contribute to fire hazards.
Flash point (Method): N/Ap
Auto-ignition temperature: N/Av
Lower flammable limit (% by volume): N/Ap
Upper flammable limit (% by volume): N/Ap
Explosion data: *Sensitivity to mechanical impact:* Not expected to be sensitive.
Sensitivity to static discharge: Not expected to be sensitive.
Oxidizing properties: No
Suitable extinguishing media: Use media suitable for the surrounding fire.
Special fire-fighting procedures/equipment: Firefighters should wear proper chemically resistant equipment and self-contained breathing apparatus operated in positive pressure mode. Move containers from fire area if it can be done without risk. Water spray may be useful in cooling equipment exposed to heat and flame.
Unusual Fire and Explosion Hazards: Product containers may build-up pressure during a fire and explode.
Hazardous combustion products: Phosphorous oxides, carbon oxides.

SECTION 5 — REACTIVITY AND STABILITY DATA

Stability and reactivity: Stable under the recommended storage and handling conditions prescribed. Product may form flammable hydrogen gas on contact with metals. Product may corrode metals. Hazardous poylmerization will not occur.
Conditions to avoid: Extreme heat and open flame.
Incompatible materials: Metals, strong caustics, strong oxidizing agents, reducing agents.
Hazardous decomposition products: None known. See 'Hazardous combustion products', Section 4.

SECTION 6 — TOXICOLOGICAL INFORMATION

Routes of exposure: Skin contact, eye contact, inhalation and ingestion.
Exposure Limits: ACGIH-TLV: Phosphoric acid – 1 mg/m^3; OSHA-PEL: Phosphoric acid – 1 mg/m^3; AIHA-TWA: Propylene glycol – 50 ppm (vapour and aerosol).
Toxicological data:

Acute Oral LD_{50}	:	> 5 000 mg/kg
(Rat)		Non acutely toxic. Guidelines: OECD 401, FIFRA.
Acute Dermal LD_{50}	:	> 2 000 mg/kg
(Rabbit)		Not toxic. Guidelines: OECD 402, FIFRA.
Acute Eye Irritation	:	Strong irritant.
(Rabbit)		Guideline: OECD 405
Dermal Irritation	:	Non to very mild irritant.
(Rabbit)		Guideline: OECD 404
Skin Sensitization	:	Non sensitizing.
(Guinea pigs)		Guideline: OECD 476, FIFRA

POTENTIAL HEALTH EFFECTS

Signs and symptoms of short-term (acute) exposure:

Inhalation: Harmful by inhalation. May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include shortness of breath, coughing and chest pain.
Skin contact: Skin contact may cause severe irritation and/or corrosive burns.
Eye contact: Direct eye contact may cause severe irritation and corrosive burns. Could cause permanent eye damage.
Ingestion: Ingestion may cause severe irritation and corrosive injury to the mouth, throat and stomach. Could cause stomach ulcers.

Effects of long-term (chronic) exposure: Prolonged or repeated skin exposure to low concentrations may cause drying and cracking of the skin.
Other important hazards: None known.
Carcinogenicity: None of the ingredients are classified as carcinogens by IARC or ACGIH.
Teratogenicity, mutagenicity, other reproductive effects: None known.
Sensitization to material: None known.
Synergistic materials: Not available.
Conditions aggravated by exposure: Skin, eye and respiratory disorders.

SECTION 7— FIRST AID MEASURES

Inhalation: Immediately remove person to fresh air. If breathing stops, provide rescue breathing. If breathing is difficult, give oxygen. Obtain medical attention immediately.
Skin contact: Immediately flush skin with running water for at least 20 minutes, while removing contaminated clothing. Obtain medical attention immediately. Launder clothing before re-use.
Eye contact: Immediately flush eyes with running water for at least 20 minutes. Obtain medical attention immediately.
Ingestion: If swallowed, do NOT induce vomiting. Have victim drink one to two glasses of water to dilute material in the stomach. If milk is available it may be given after water. Obtain medical attention immediately. Never give anything by mouth to an unconscious person.

SECTION 8 — PREVENTATIVE MEASURES

Spill, leak or release: Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate protective equipment including proper respiratory protection. Keep all other personnel away from the spill/release. Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. Eliminate all sources of heat and flame. Ventilate area of release. Stop leak if you can do so without risk. Contain and absorb with inert absorbent material, then place absorbent material into a suitable container for later disposal (see below). Do not use

metal containers. Flush spill area with water. Do not flush to sewer. Notify the appropriate authorities as required.

Waste disposal: Handle waste according to recommendations below. Dispose in accordance with all applicable federal, provincial, and local regulations.

*****PROTECTIVE EQUIPMENT*****

Ventilation and engineering controls: Use with adequate ventilation. Exhaust ventilation may be required to meet TLV requirements.

Respiratory protection: Respiratory protection is required if the airborne concentration exceeds the TLV. Use NIOSH approved respirators. For emergencies or where the airbourne concentration is not known, use a full-face air-supplied respirator. Advice should be sought from respiratory protection specialists.

Protective gloves: Wear gloves impervious to the material. Advice should be sought from glove suppliers.

Eye protection: Chemical goggles, to prevent liquid splashes from entering the eyes.

Other protective equipment: Wear chemically resistant overalls and impervious boots to prevent skin contact. A safety shower and eyewash station should be made available in the immediate working area.

*****STORAGE & HANDLING*****

Storage and handling conditions:

Handling: This material is a corrosive liquid. Wear chemically protective equipment during handling. Use in a well-ventilated area. Do not breathe vapours or mists. Avoid contact with eyes, skin and clothing. Do not wear contact lenses while handling this material. Wash thoroughly after handling. Keep away from extreme heat and flame. Keep away from metals and incompatibles. Use caution when opening containers. Keep container tightly closed when not in use.

Storage: Store in a cool, dry, well-ventilated area away from incompatibles, heat and flame. Store below 40 degrees centigrade (104°F) otherwise decomposition of the product can occur. Keep out of direct sunlight. Protect from damage.

Special Shipping Information:

Not Regulated for Transport

SECTION 9 — PREPARATION INFORMATION

Prepared by: NutriAg Ltd.
Telephone number: 416-636-1555
Preparation date: January 27,2009
Re-issue date: August 2, 2011

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CEPA information: All ingredients are listed on the DSL/NDSL.
TSCA information: All ingredients are listed on the TSCA inventory.

Additional notes or references:

Legend: ACGIH – American Conference of Governmental Industrial Hygienists
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
DSL – Domestic Substances List
IARC – International Agency for Research on Cancer
Inh – Inhalation
N/Ap – Not Applicable
N/Av – Not Available
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
OSHA – Occupational Safety and Health Act
PEL – Permissible Exposure Limit
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act

References: - ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2003.
- International Agency for Research on Cancer Monographs, 2004.

- Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2004 (Cheminfo, HSDB and RTECs).
- Material Safety Data Sheet from manufacturer.