Material Safety Data Sheet

SECTION 1 – IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

Product Name: Iontopak – Iontophoresis Solution Kit – Sodium Nitrate
Product Number: CFA200
Manufacturer/Supplier: Advanced Instruments, Inc.
Two Technology Way
Norwood, MA 02062
1-781-320-9000

Origin: USA

Date of Issue: 2013-04-09

Chemical Identification: Sodium Nitrate ($Na\ NO_3$)
Intended Use: Reconstituted solution for use with the Cystic Fibrosis Analyzer (Model CFA).

SECTION 2 – HAZARDS IDENTIFICATION

Health

Routes of Entry:
Inhalation, ingestions, or skin contact.

Health Hazards:
Ingestion is harmful. Chronic exposure may cause nausea, vomiting, dizziness, rapid heartbeat, irregular breathing, convulsions, coma, and death can occur should this conversion take place. Irritating on contact with skin, eyes, or mucous membranes.

Carcinogenicity:
Sodium nitrate may react with secondary or tertiary amines to form nitroamines (certain nitroamines are cancer suspect agents).

Symptoms of Exposure:
Can cause headache, nausea, vomiting, dizziness, collapse, gastro-intestinal irritation, rapid heartbeat, irregular breathing, coma, convulsions, and death due to circulatory collapse.

Medical Conditions Aggravated by Exposure:
Workers with a history of kidney or lung disease may be more susceptible

SECTION 3 – COMPOSITION/INFORMATION ON INGRIEDIENTS

Component:
Sodium Nitrate
CAS #:
7631-99-4
Synonyms:
Nitratine, Nitric acid, sodium salt
Percent:
99 – 100%

SECTION 4 – FIRST AID MEASURES

Emergency and First Aid Procedures:
SEEK MEDICAL ASSISTANCE IN ALL CASES OF OVEREXPOSURE.

Eyes and Skin:
Immediately flush thoroughly with water for at least 15 minutes.

Inhalation:
Remove to fresh air; give artificial respiration if breathing has stopped.

Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point (°F):
Not applicable

Flammable Limits:
LEL: Not available
UEL: Not available

Extinguishing Media:
Use water only.
Fire Fighting Procedures:
Wear self-contained breathing apparatus and protective clothing.
Fire and Explosion Hazards:
Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increase the flammability of any combustible material. Contact with oxidizable substances may cause extremely violent combustion. May explode when heated to 537ºC or on severe impact or on contact with cyanides, ammonium salts, cellulose, lithium, potassium plus ammonia, and sodium thiosulfate.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill Response:
Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Section 8, Exposure Controls/Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if it can be done without risk. Avoid raising dust. Clean up and place in closed container for proper disposal as described under, Section 13, Disposal Considerations. Comply with local, state, and country regulations on reporting releases. Refer to Section 15, Regulatory Information, for regulatory data.

SECTION 7 – HANDLING AND STORAGE

Keep container tightly closed. Store in cool, dry, ventilated area. Protect against physical damage and moisture. Isolate from any source of heat or ignition. Avoid storage on wood floors. Separate from incompatibilities, combustibles, organic, or other readily oxidizable materials. Containers of this material may be hazardous when empty since they retain product residues (dust, solids). Do not breathe dust. Do not get in eyes, on skin, or on clothing.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:
Material should be handled or transferred in an approved fume hood or with adequate ventilation. Protective gloves must be worn to prevent skin contact (Neoprene or equivalent). Safety glasses with side shields, or full-face shield must be worn at all times.
Work/Hygienic Practices:
Wash hands thoroughly after handling. Do not take internally. Eyewash and safety equipment should be readily available.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:
White or yellowish-white crystalline granules

Boiling Point:
> 320ºC

Specific Gravity (H_2O = 1):
2.168

Melting Point (ºC):
271ºC

Evaporation Rate (BuAc = 1):
Not available

Vapor Pressure (mm Hg):
Not available

Vapor Density (AIR = 1):
Not available

Volatility:
0%

Solubility in Water (%):
Soluble

SECTION 10 – STABILITY AND REACTIVITY

Stability:
This material is stable in closed containers at room temperature. Material slowly oxidizes to sodium nitrate when exposed to air. Very hygroscopic.
Conditions to Avoid:
Heat, flame, sources of ignition, shock, friction, and incompatibilities

Materials to Avoid:
Reducing agents, acids, amines, chlorates, permanganates, cyanides (e.g. potassium cyanide, sodium cyanide), metals as powders (e.g. hafnium, raney nickel), hypophosphites, sulfites, tannic acid, organic matter, antipyrine, ammonium salts, acetanilide, iodides, mercury salts, moisture, air, activated carbon, vegetable astringents.
Hazardous Decomposition:
Nitrogen oxides, irritating toxic fumes and gases.
Hazardous Polymerization:
Does not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Symptoms of Exposure:
Ingestion is harmful and may be fatal. Can cause headache, nausea, vomiting, and dizziness. Chronic exposure may cause blood, cardiovascular system, and smooth muscle damage. Irritating on contact with skin, eyes, or mucous membranes. Skin absorption may be harmful.
Medical Conditions Aggravated by Exposure:
None indicated.
Routes of Entry:
Inhalation, ingestion, or skin contact.
Carcinogenicity:
This material is not listed (ACGIH, IARC, NIOSH, NTP, or OSHA) as a cancer causing agent.
Toxicity Data:
orl-rat LD50: 150 mg/kg; inhalation rat LC50: 550 ug/m3; irritation: eye rabbit: 500 mg/24H mild
Toxicological Findings:
Investigated as a tumorigen, mutagen, and reproductive effectors.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:
No data available. This material will not cause oxygen depletion in aquatic systems. It has a low potential to affect aquatic organisms, secondary waste treatment microorganisms, and the growth of some plants. It has a moderate potential to affect the germination of some plants.

Acute aquatic effects:	96-hour LC50
Fathead minnow:	GT 1000 mg/L 96-hour LC50
Water flea:	GT 1000 mg/L

Environmental:
Nitrates are predominantly used as fertilizer. Unfortunately, nitrates have a tendency to migrate into groundwater as they do not bind to soil and are extremely soluble. Excessive levels of nitrates in drinking water may cause serious illness and death. Infants are most susceptible to nitrate toxicity. “Blue Baby Syndrome” can occur when the infant’s conversion of nitrate to nitrite interferes with the oxygen-carrying capacity of the blood. Symptoms of Blue Baby Syndrome include, but may not be limited to, shortness of breath and bluish colored skin.
Physical:
No information available.
Other:
No information available.

SECTION 13 – DISPOSAL CONSIDERATIONS

EPA Waste Numbers:
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series:
None listed.
Treatment:
Specified Technology – Contact your local permitted waste disposal site (TSD) for permissible treatment sites. ALWAYS CONTACT A PERMITTED WASTE DISPOSAL SITE (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE, AND COUNTRY REGULATIONS.

SECTION 14 – TRANSPORT INFORMATION

DOT Proper Shipping Name:
Sodium Nitrate
DOT ID Number:
UN1498
Canada TDG:
UN1498

SECTION 15 – REGULATORY INFORMATION

U.S. Federal

TSCA:
CAS # 7631-99-4 is listed on the TSCA inventory.
Health & Safety Reporting List:
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules:
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b:
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule:
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and Corresponding RQs:
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances:
None of the chemicals in this product have a TPQ.
SARA Codes:
CAS #7631-99-4: immediate, delayed, fire.
Section 313:
This material contains Sodium nitrate (listed as Water Dissociable Nitrate Compounds), 100% (CAS #7631-99-4), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
State:
CAS #7631-99-4 can be found on the following state right-to-know lists: New Jersey, Pennsylvania, Massachusetts.
California Prop 65:
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

Hazard Symbols:
XN O
Risk Phrases:
R 22: Harmful if swallowed.
R 36/37/38: Irritating to eyes, respiratory system and skin.
R 8: Contact with combustible material may cause fire.
Safety Phrases:
S 17: Keep away from combustible material.
S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
WGK (Water Danger/Protection):
CAS #7631-99-4: 1
Canada - DSL/NDSL:
CAS #7631-99-4 is listed on Canada's DSL List.
Canada - WHMIS:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations, and the MSDS contains all of the information required by those regulations.
Canadian Ingredient Disclosure List:
CAS #7632-99-4 is listed on the Canadian Ingredient Disclosure List.

Reviews, Standards, and Regulations:
OEL=MAK
EPA FIFRA 1988 Pesticide subject to registration or re-registration FEREAC 54, 7740, 1989

SECTION 16 – OTHER INFORMATION

Comments:
Danger! Strong oxidizer. Contact with other material may cause fire. Harmful if swallowed or inhaled. May cause irritation to skin, eyes, and respiratory tract.

NFPA Hazard Ratings:

Health:	1
Flammability:	0
Reactivity:	1
Special Hazards:	Oxidizer