

# Fertiliser Quality Policy

Australian fertiliser company Incitec Pivot, is committed to providing products and services that meet customer needs.

Manufacturing a wide range of fertilisers in Australia, Incitec Pivot also source fertiliser products from other Australian suppliers and overseas to offer a comprehensive product range.

In Australia, fertilisers must meet certain standards and be labelled in accordance with State Fertiliser Acts and the Fertilizer Industry Federation of Australia (FIFA) Code of Practice for Fertilizer Standards.

Incitec Pivot has set specifications for domestically manufactured and imported fertilisers that meet these standards. Routine laboratory analysis is performed to ensure products meet these specifications.

Farmers not only want to know that products they are buying are suitable for the intended use, they are also looking for advice on how to use them. Incitec Pivot is a Fertcare® accredited organisation. The company's agronomists and sales advisory staff are also Fertcare® accredited.

Incitec Pivot also operates a soil, plant tissue and water analysis laboratory. This service is registered with the Australasian Soil and Plant Analysis Council (ASPAC) and the National Association of Testing Authorities (NATA).



## Manufacture

Incitec Pivot operates a number of manufacturing facilities throughout Australia.

DAP and MAP are produced at the Southern Cross operations in north west Queensland, which comprise the mine and manufacturing facilities at Phosphate Hill.

Anhydrous Ammonia (BIG N®), urea, and granulated ammonium sulfate (Gran-am®) are manufactured in Brisbane.

Granulock® compound fertilisers are manufactured in Brisbane and Newcastle.

Single superphosphate (SuPerfect® & SuPer) are manufactured in Newcastle, Geelong and Portland. Production from all these facilities is controlled through the company's own Quality Control Laboratories.



## Imports

Incitec Pivot supplements local production with imports of a number of fertiliser products, including urea, calcium ammonium nitrate, ammonium sulfate nitrate, and high analysis phosphorus, potassium, compound and trace element fertilisers.

**Imported fertilisers are sourced in compliance with the FIFA Purchasing Code of Practice.**

Product Specifications are set by Incitec Pivot's Market Managers and Certificates of Analysis sought from suppliers.

The delivered products are then analysed through Incitec Pivot's own Quality Control Laboratories to ensure they comply with statutory limits and the label analyses, e.g. maximum limits for heavy metal impurities such as cadmium, lead and mercury.

**Incitec Pivot**

**Because the land is your life.**

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## Quality Assurance (QA)

Internal quality control systems are in place for fertilisers and blends, but apart from the products detailed below for Brisbane, external auditors are not engaged to accredit them.

Ammonia, Urea, Gran-am and Granulock Compounds produced in Brisbane are Quality Assured to AS/NZS ISO 9001:2000 standards. A number of products manufactured in Brisbane are used as raw materials in other industries and must be manufactured to exacting standards. Fertilisers have been included as part of the site's overall QA program.

## Fertiliser Impurities

Fertilisers contain various impurities. These are mostly derived from the raw materials used in their manufacture, while some, such as biuret in urea, are produced in the manufacturing process.

Some of these impurities may accumulate in soils or plants, affect the health of plants or grazing animals, or potentially affect food safety and the marketability of farm produce. For these impurities, regulatory controls and industry standards have been set. Chief among these are:

- Biuret in urea;
- Fluoride (F) in phosphorus fertilisers (>2% P);
- Heavy metal impurities (cadmium, lead and mercury). Of particular concern are cadmium in phosphorus fertilisers and lead in metallic trace element fertilisers containing copper and zinc.

Incitec Pivot declares the impurity content of fertilisers on the product label, as required under some State Fertiliser Acts and the FIFA Code of Practice for Fertilizer Standards.

Information on the fluoride content of phosphorus fertilisers is shown on the labels for bulk and bulk bag deliveries. Small packs (50, 40 and 25 kg) are being progressively updated to include information of the fluoride content of phosphorus fertilisers.



## Cadmium

In Australia, the maximum allowable concentration of cadmium (Cd) in phosphorus fertilisers is 300 mg Cd/kg P.

The pasture grades of single superphosphate marketed by Incitec Pivot (SuPerfect and SuPer) contain up to this amount of cadmium (300 mg Cd/kg P max.).

These pasture fertilisers are not recommended for use in vegetable crops in which phosphorus fertilisers are typically applied at high rates. Fertilisers with a lower cadmium content need to be used.

The food standards for cadmium in farm produce are most likely to be exceeded in root and tuber crops, e.g. potatoes, and leafy vegetables.

A low cadmium grade of single superphosphate (Incitec Pivot Low Cad Super) containing 100 mg Cd/kg P (max) is available for use in vegetable crops.

The high analysis phosphorus fertilisers marketed by Incitec Pivot (DAP, MAP and Triple Super) may also be used. These products contain less than 100 mg Cd/kg P, and are typically less than half this level.

All the complete NPK blends in the Incitec Pivot product range that have been formulated for use in vegetable crops contain less than 100 mg Cd/kg P. The pasture grades of single superphosphate are not used in these products.

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## Mineral Supplements for Livestock

Some Incitec Pivot products may be used as non-protein nitrogen and mineral supplements for ruminants (cattle, sheep, goats). These products are:

Common Name	Product Name
Urea	Incitec Pivot Prilled Urea Incitec Pivot Stockfeed Urea Incitec Pivot Granular Urea
Ammonium sulfate	Incitec Pivot Gran-am Incitec Pivot Sol-am
MAP	Liquifert P
Potassium chloride	Incitec Pivot Muriate of Potash
Elemental sulfur	Incitec Pivot Stockfeed Sulfur

Maximum for impurities, i.e. fluorine, cadmium, lead and mercury, are detailed on the product label, and are within statutory requirements.

Agricultural and veterinary chemicals, e.g. insecticides, antibiotics, growth regulants, are not used in the manufacture of these products.

Note. The granular phosphorus fertilisers marketed by Incitec Pivot, e.g. DAP, MAP, Triple Super, SuPerfect, and SuPer must not be used as phosphorus supplements, as these products are too high in fluorine (F) for direct mineral supplementation to livestock.

## Nutrient Advantage

Incitec Pivot's antecedent companies have operated a laboratory service since 1963, making it Australia's oldest commercial soil testing service.

The laboratory is now known as 'Nutrient Advantage Laboratory Services' and operates from a modern testing facility located in Werribee, Victoria. The

laboratory conducts nutritional analyses on soil, plant and water samples and is equipped to process in excess of 100,000 samples per year.



The laboratory is accredited by the National Association of Testing Authorities (NATA) and operates in accordance with the international standard ISO/IEC 17025.

The laboratory's scope of accreditation is freely available on the NATA website [www.nata.asn.au](http://www.nata.asn.au) under Accreditation No: 11958.

In order to meet a requirement of NATA accreditation the laboratory regularly participates in inter-laboratory proficiency studies coordinated by the Australasian Soil & Plant Analysis Council (ASPAC). The Nutrient Advantage Laboratory is certified by ASPAC as meeting the proficiency criteria for a wide range of soil and plant nutritional assays.



Management and staff at Nutrient Advantage Laboratory Services are committed to generating high quality analytical results in a timely fashion in order to support fertiliser application recommendations.

The "Nutrient Advantage" Decision Support System is used to report laboratory results and recommend nutrient rates and products to customers. The company's agronomists developed this software program. It is based on many years of research, consultation with Government researchers and advisers, and experience.

## Fertcare®

Fertcare® is the national training and accreditation program of the Fertilizer Industry Federation of Australia (FIFA). It aims to ensure that farmers receive consistent and quality advice on using fertilisers for optimum production, protection of the environment and food safety.

Incitec Pivot is Fertcare® accredited at the organisation level, the highest level that can be achieved.

FIFA has set targets for the Fertcare® accreditation of industry staff. Incitec Pivot is progressively training staff in line with this requirement.

Fertcare® accredited advisers are independently assessed and audited. This ensures that the detailed plant nutrition advice that they provide, based on soil and tissue testing, takes account of environmental and food safety issues and is based on the best available science.



Incitec Pivot