



Knowledge grows

# BOLIFOR® AQUA

BOLIFOR® AQUA is a unique monocalcium phosphate produced at precise conditions by reacting phosphoric acid and a calcium source in a granulator. The purity of the selected raw materials and Yara's integrated production process, according to GMP+ standards, ensure the consistency of BOLIFOR® AQUA properties.

BOLIFOR® AQUA appears as grey granules and it is highly soluble in water and diluted acids. BOLIFOR® AQUA is odorless and has an acidic taste.

## Sales specification

Product Properties	
Phosphorus (P)	22.3%
Relative solubility in	
- 2% citric acid	98%
- alkaline ammonium citrate	98%
- water	75%
Calcium (Ca)	16,50%
Ca:P ratio	0.72:1
Magnesium (Mg)	1%
pH	4-5
Ash insoluble in 3N HCl	< 1%
Moisture (mechanical free water)	< 3%

## Physical Properties

Particle size of BOLIFOR® AQUA	>95% within 0.063-0.71 mm, guaranteed when delivered from factory
Bulk density kg/m <sup>3</sup>	900-1100
Water activity aw	< 0.70

## Nutritive value

Trial data show significant differences in phosphorus digestibility between and within the different generic types of inorganic feed phosphates. The phosphorus digestibility of our feed phosphates has been evaluated by independent research institutes in different species. Trial results demonstrate that BOLIFOR® feed phosphates digestibility values are at the top of the range.

## Identification

**Chemical formula:**  $\text{Ca}(\text{H}_2\text{PO}_4)_2 \times \text{H}_2\text{O}$   
**CAS No.:** 10031-30-8  
**EINECS No.:** 231-837-1

Inorganic feed material according to Regulation (EC) No 767/2009 of the European Parliament and of the Council and Commission Regulation (EU) No 68/2013.



## Quality check references

<b>Total phosphorus (P) extraction</b>	Comparable with Regulation (EC) No 2003/2003 method 3.1.1
- in 2% citric acid	Regulation (EC) No 2003/2003 method 3.1.3.
- in alkaline ammonium citrate	Regulation (EC) No 2003/2003 method 3.1.5.1
- in water	Regulation (EC) No 2003/2003 method 3.1.6
<b>Phosphorus Determination</b>	Comparable with Regulation (EC) No 2003/2003 method 3.2
<b>Calcium (Ca) extraction</b>	Comparable with Regulation (EC) No 2003/2003 method 3.1.1
<b>Calcium (Ca) determination</b>	Comparable with Directive 71/250/EEC method 3
<b>pH</b>	1% solution, in water
<b>Ash insoluble in 3N HCl</b>	Directive 71/250/EEC method 6
<b>Moisture (mechanical free water)</b>	Acetone wash, ambient temperature

Undesirable substances	Standard specification	BOLIFOR® AQUA	Method of analysis
Fluorine (F)	Max. 2 g/kg	< 2 g/kg	ISE
Arsenic (As)	Max.10 mg/kg	< 5 mg/kg	HG-AAS
Cadmium (Cd)	Max. 10 mg/kg	< 0.6 mg/kg	GF-AAS
Lead (Pb)	Max. 15 mg/kg	< 2.5 mg/kg	GF-AAS
Mercury (Hg)	Max. 0.1 mg/kg	< 0.05 mg/kg	AFS
Dioxins (PCDD/F(BEQ))	Max. 0.75 ng/kg	< 0.2 ng/kg	DR CALUX
Dioxins + dioxin-like PCBs (PCDD/F and dl PCBs(BEQ))	Max. 1.0 ng/kg	< 0.3 ng/kg	DR CALUX

\*Method of Test: Method 3.2 – EC Regulation No: 2003/2003/EC.

## Directions for use

The superior chemical solubility, convenient particle size and biological availability make BOLIFOR® AQUA a top ranked granular calcium and phosphorus source. It is recommended for use in aqua culture feed, but can also be used in concentrates, compound feed, mineral feed and other feeds for petfood, cattle, pigs, poultry, aqua and all other animals.

## Classification, labelling and packaging

Irritating – avoid eye contact.

Labelling conforms to Regulation (EC) No 767/2009 of the European Parliament and of the Council and to Commission Regulation (EU) No 68/2013.

Packaging available in 25kg and 1000 kg big bag.

## Handling and storage

BOLIFOR® AQUA should be stored indoors in a dry and cool place in properly sealed packaging. When handled and stored according to instructions the shelf life is three years.

## Transport and transport regulation

Transported on road, rail and by sea. Not classified as dangerous goods.

Yara Animal Nutrition  
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Yara, Animal Nutrition is part of the Cefic Sector Group  
 Inorganic Feed Phosphates

*The information above is intended to serve as guidelines and does Not constitute a guarantee. We reserve the right to make changes. Valid from 2014-05-01.*

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