



incotec

the seed enhancement company

Part of Croda International Plc

Pesticide loading analysis

using high-performance liquid chromatography



Plant protection products (PPP) loaded on seed reduce the risk of crop losses to insects and other pests and thereby increase the crop yield. The optimal PPP dosage lies within a specific range: a lower dosage could significantly reduce efficacy and a higher dosage may not only reduce efficacy but could also harm the seed and/or environment. Monitoring the loading process and determining the actual loading on your seed is of the utmost importance.



Pesticide loading analysis

using high-performance liquid chromatography

Strict protocols

High-performance liquid chromatography (HPLC) is an accepted high-tech method of determining the amount of PPP that has been applied to a seed. Incotec uses strict protocols and our analysis can precisely determine the concentration of the target compound.

- A sample of sufficient size is taken
- The PPP is extracted in a specific mixture of an organic and inorganic liquid tailored to the PPP and crop
- The resulting extraction solution is applied to the optimal HPLC column
- Using a gradient, the different chemical compounds are released from the column at specific time intervals

Methods of analyses

Incotec offers two methods:

1. The batch method, a sample is pooled and the average loading is determined. This test is always performed in at least two independent duplicates. The results provide information on average PPP dosages in the batch
2. Seed-to-seed distribution, PPP loading of individual seeds is established and correlated to individual seed weight. This determines the seed to seed distribution and gives insight into the variability of your seed coating process. The information these results provide can be very valuable, especially when setting up a new treatment process.

Broad range of PPPs

Our HPLC technology can, in theory, accurately identify and quantify almost every chemical. The list is not exclusive and is constantly expanding. Contact us if you would like a specific compound tested.

High quality

Incotec's high-quality laboratory is ISO 9001 accredited and we have extensive expertise and experience with HPLC pesticide loading analysis. We can help you optimize the benefit from the insecticide or fungicide you are using through monitoring and improving the quality of your loading process. This potentially increases your crop yield, bringing benefits for you and for your customer.

Routinely run insecticides	Routinely tested fungicides
Clothianidine	Azoxystrobin
Fipronil	Difenoconazole
Imidacloprid	Fludioxonil
Tefluthrin	Flutriafol
Thiamethoxam	Iprodione
	Metalaxyl M
	Picoxystrobin
	Pyraclostrobin
	Thiophanate-methyl
	Thiram

Shipping made easy

Our lab has been accredited the Exemption 2008/61/EG status, which means that no phytosanitary certificates are required. We will provide shipping instructions.

For more information on our services and pricing email IAL_analyticalservices@incotec.com.

