

CROP PROTECTION ANALYTICAL SERVICES



Product Chemistry

Preliminary Analysis

Stability/Corrosion Studies

The Maxxam Advantage

About Maxxam

Expedite product approval with Maxxam

Maxxam's Product Testing group serves a variety of clients who require analytical testing to support product registration, development or process trouble-shooting. Our customers manufacture a diverse range of substances including polymers, pharmaceuticals and agrochemicals.

In many cases, client projects require custom method development and validation of new assays. Our state of the art laboratory facilities are equipped with a comprehensive inventory of techniques including LC/MS/UV, GC/ MS/FID, FTIR and ICPMS. With almost 40 years experience in providing research and routine analytical services, Maxxam is trusted by clients worldwide to provide expert support throughout the regulatory process.

For agrochemicals such as pesticides, Maxxam offers a series of analytical services in support of product registration and regulatory submission.

Product Chemistry

Analyses are conducted to establish physical and chemical characteristics of actives (AIs) and end-use products (EUPs). Specific procedures used for each test are based primarily on the U.S. Environmental Protection Agency Office of Prevention, Pesticides, and Toxic Substances (OPPTS) Product Property Guidelines, Series 830. Where applicable, other standardized testing procedures are used such as those published by the American Society for Testing and Materials (ASTM), the Collaborative International Pesticides Analytical Council (CIPAC), and the Organization for Economic Co- Operation and Development (OECD).

Preliminary Analysis

Specifically, Maxxam conducts Preliminary Analysis (OPPTS 830.1700), often referred to as 5 Batch Analysis, primarily on generic technicals. This entails using state-of-the-art laboratory instrumentation to identify and quantify the impurities present. Routinely, this is done on all impurities above 0.1% (w/w). Additional testing such as moisture content and acetone insoluble material are also conducted to obtain closure of the study such that at least 98% of the material is identified.



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Routine Services and their Regulatory Method ID numbers:

Test name	OPPTS #	OECD #
Colour	830.6302	
Physical State	830.6303	
Odour	830.6304	
Oxidation/ Reduction: chemical incompatibility	830.6314	
Storage stability	830.6317	
Flammability (Solids)	830.6315	
Explosibility	830.6316	
Miscibility	830.6319	
pH	830.7000	
UV/Visible absorption	830.7050	101
Viscosity	830.7100	114
Melting point/ melting range	830.7200	102
Boiling point/ boiling range	830.7220	103
Density/relative Density/bulk density	830.7300	109
Partition coefficient shake flask method	830.7550	107
Partition coefficient estimation by HPLC	830.7570	117
Water solubility	830.7840	105
Hydrolysis	835.2120	111
Absorption/ Desorption	835.1220	106

To inquire about any tests not listed here, or for more information, please email: pdtchem@maxxam.ca

Stability/Corrosion Studies

The objective of the storage stability study is to characterize the shelf life of the test product in its commercial packaging. Maxxam conducts Stability/Corrosion Studies (OPPTS 830.6317/6320) on active ingredient and formulated product under controlled conditions. The product is maintained at ambient temperature and monitored over a 12 month period during which assay and container corrosion characteristics are evaluated.

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Maxxam adheres to requirements set by the U.S. Food and Drug Administration (FDA) Good Laboratory Practice (GLP), as well as Health Canada and the FDA's Good Manufacturing Practices (GMP). Maxxam is certified by the Standards Council of Canada (SCC) as an Organisation for Economic Co-operation and Development (OECD) GLP facility for specific areas of expertise.

GLP compliant studies performed at Maxxam are acceptable in all OECD member countries, including the US and the European Union, according to the decision of the OECD Council Acts on Mutual Acceptance of Data (MAD).

Our regulatory data is reviewed by technical staff, and independent quality control and quality assurance auditors. Maxxam facilities have been FDA inspected, are Health Canada GMP licensed, and continue to be inspected on an ongoing basis.

Maxxam's Quality Assurance Unit (QAU) has almost 40 years of combined experience in auditing and monitoring technical conduct in GLP laboratory and field studies. The team includes two externally certified GLP quality assurance professionals and one SCC qualified GLP inspector.

Canada enjoys a unique position within the WTO which enables companies to work on existing patented materials. Examples of some of the generic technical actives on which we have worked include:

- Bromoxynil Octanoate
- Clodinafop-propargyl
- Clethodim
- Clopyralid
- Quinclorac
- Bromoxynil Heptanoate
- Fenoxaprop-p-Ethyl
- Thifensulfuron
- MCPA
- Tribenuron
- Glyphosate
- Propiconazole

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Maxxam is the Canadian market leader in analytical services and solutions to the energy, environmental, food and DNA industries and a member of the Bureau Veritas Group of companies – a world leader in testing, inspection and certification services. We support critical decisions made by our customers through the application of rigorous science and the knowledge and expertise of our over 2500 employees.