

## Analysis and Application Testing

Our service portfolio for analysis and application testing of products

**Potential directives:** Biocidal Product Directives 98/8/EC, Crop Protection Directive PPP 91/414/EEC, AVPMA, EPA related and Aerosol Directive 2008/47/EC



Description	Method
1. <b>Analytical method development for biocidal applications by GC-FID, HPLC-DAD or LC/MS (Ion trap) according to international requirements</b>	
2. <b>Method validation of aerosol and none aerosol products according to international requirements</b>	e.g SANCO 3030/99 (GLP)
3. <b>Short-term stability tests at reduced and evaluated temperature for aerosol and non aerosol products according to international requirements</b>	CIPAC MT 46
4. <b>Short-term stability tests at reduced and evaluated temperature for liquid products according to international requirements</b>	CIPAC MT 46 and 39 (GLP and Non GLP)
5. <b>Long-term stability at 2 various temperatures of aerosol and none aerosol products according to international requirements</b>	according to FAO/WHO (GLP and Non GLP)
6. <b>Qualification of active substances using GC-FID, HPLC-DAD and LC/MS Ion trap according for:</b> <ul style="list-style-type: none"> <li>• Insecticides and Repellents               <ul style="list-style-type: none"> <li>- Natural Pyrethrum</li> <li>- Synth. Pyrethroids</li> <li>- Any other insecticide active ingredient</li> <li>- Any repellent active ingredient</li> </ul> </li> <li>• Rodentizides</li> <li>• Plant protection active ingredients</li> <li>• Wood preservation active ingredients</li> <li>• Disinfectant and hygiene active ingredients</li> </ul> <p><b>Other product types on request</b></p>	according to international Guidelines (e.g. CIPAC) (GLP and Non GLP)
7. <b>Qualification of active substances content in application acting as fumigants according to international requirements</b>	Titration according to international requirements (GLP and Non GLP)

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Description	Method
<p>8. <b>Determination of aerosol specific data for sprays, trigger, fogger, pump sprays, etc.) according to international requirements.</b></p> <ul style="list-style-type: none"> <li>• Particle size distribution of aerosol based products using <b>Malvern Spraytec laser</b> evaluation</li> <li>• Normal spray rate (only one filling rate) and specific spray rate with different filling volume</li> <li>• Density of intermediate / propellant mix. (in can determination)</li> <li>• Spray and stream character (picture, diameter, etc.)</li> <li>• Total discharge / residue in package</li> <li>• Can pressure (20 °C and 50 °C)</li> <li>• Valve crimping values</li> <li>• Different safety properties of aerosols cans complying with Aerosol Directive 2008/47/EC (only required for spray cans)</li> <li>• Flame length and ignition distance of spray cans (External laboratory)</li> </ul>	<p>according to CIPAC MT187</p> <p>according to FEA 643</p> <p>according to FEA 605</p> <p>according to FEA 644</p> <p>according to WHO/FAO</p> <p>according to FEA 604 / 606</p> <p>according to FEA</p> <p>according to Aerosol Directive 2008/47/EC</p> <p>according to EPA  <b>(GLP and Non GLP)</b></p>
<p>9. <b>Determination of active ingredient concentration in the air or in a defined spaces</b></p> <ul style="list-style-type: none"> <li>• Determination of insecticidal active concentration during usage time</li> <li>• Determination of max. concentration and degradation during use</li> <li>• Determination of residues on surfaces during use</li> <li>• Determination of health and safety aspects during use</li> </ul>	<p>For the determination different methods are available at BioGenius:</p> <ul style="list-style-type: none"> <li>- Desorption/ Absorption</li> <li>- Specific sensors</li> <li>- Liquid phase absorption</li> <li>- Extraction</li> </ul> <p><b>(GLP and Non GLP)</b></p>
<p>10. <b>Application test for liquid products (like emulsions, concentrates, dispersions, etc.) according to international requirements:</b></p> <ul style="list-style-type: none"> <li>• Persistent foaming</li> <li>• Suspensibility</li> <li>• Dispersion stability</li> <li>• Dilution stability</li> <li>Emulsion stability</li> <li>• Pour ability of suspension concentrates</li> <li>• Water content Karl-Fischer</li> <li>• Wet sieving</li> <li>• Viscosity</li> <li>• Rel. Density</li> <li>• pH-Value</li> <li>• Acidity / alkalinity</li> <li>• General product characteristic</li> </ul>	<p>CIPAC MT 47.2</p> <p>CIPAC MT 161, MT 184</p> <p>CIPAC MT 180</p> <p>CIPAC MT 41</p> <p>CIPAC MT 148</p> <p>CIPAC MT 30.5</p> <p>CIPAC MT 185</p> <p>OECD 114 / CIPAC MT 192</p> <p>EC A.1.</p> <p>CIPAC MT 75</p> <p>CIPAC MT 31</p> <p>According to international requirements  <b>(GLP and Non GLP)</b></p>

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Description	Method
<p>11. <b>Application test on solid application (like granulates, pellets, powders, etc.) according to international requirements:</b></p> <ul style="list-style-type: none"> <li>• Bulk density</li> <li>• Wetability</li> <li>• Suspensibility</li> <li>• Dispersion stability</li> <li>• Sieve analysis, dry sieving</li> <li>• Attrition resistance</li> <li>• Flow ability</li> <li>• Dust ability test after tropical storage</li> <li>• Water content (Karl-Fischer)</li> <li>• Disintegration time</li> <li>• Wet sieving</li> </ul>	<p>CIPAC MT 159            CIPAC MT 53.3            CIPAC MT 15.1, MT 168              CIPAC MT 59.2            CIPAC MT 178            CIPAC MT 172            CIPAC MT 34            CIPAC MT 30.5            WHO/M/28            CIPAC MT 167  <b>(GLP and Non GLP)</b></p>
<p>12. <b>Determination of required data for aerosol and none aerosol products according to international requirements:</b></p> <ul style="list-style-type: none"> <li>• Viscosity</li> <li>• Density</li> <li>• pH-Value</li> <li>• Acidity / alkalinity</li> <li>• General characteristic of product</li> </ul>	<p>OECD 114 / CIPAC MT 192            EC A.1.            CIPAC MT 75            CIPAC MT 31            under the principles of GLP</p>
<p>13. <b>Specific application characteristics:</b></p> <ul style="list-style-type: none"> <li>• Evaporation behaviours of long term-vaporizer (gravimetrical evaluation)</li> <li>• Evaporation rate of short term-vaporizer (analytical evaluation)</li> </ul>	<p>under the principles of GLP            under the principles of GLP</p>

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## Description

## Method

In addition to BioGenius's own data packages we are in a position to provide physical/chemical as well as safety data in collaboration with external partner laboratories.

### 14. **Determination of data for various applications according to international requirements:**

- |   |          |
|---|----------|
| • Melting point   | EC A.1.  |
| • Boiling point   | EC A.2.  |
| • Surface tension   | EC A.5.  |
| • Water solubility fl ask method or Column elution method         | EC A.6.  |
| • Vapour pressure   | EC A.4.  |
| • Flash point   | EC A.9.  |
| • Flammability solid, screening test or complete test             | EC A.10. |
| • Flammability contact with water                                 | EC A.12. |
| • Pyrophoric properties   | EC A.13. |
| • Danger of explosion   | EC A.14. |
| • Ignition temperature (liquids and gases)                        | EC A.15. |
| • Auto ignition temperature of solids                             | EC A.16. |
| • Oxidising properties of solids screening test or complete check | EC A.17. |
| • Oxidising properties  | EC A.21. |

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