

Technical Datasheet

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| Analysis Name: | Determination of Mycotoxins by LC-MS/MS |
| Method Number: | LIBR 100 |
| Scope Application: | Description of a multiresidue method for the quantitative determination of 15 mycotoxins in foods by liquid chromatography-tandem mass spectrometry (LC-MS/MS). The mycotoxins considered are: ochratoxin A (OTA); aflatoxins B1, B2, G1, G2 and M1 (AFLAs); zearalenone (ZEN); fumonisins B1 and B2 (FBs); T-2 and HT-2 toxins; nivalenol (NIV); deoxynivalenol (DON). |
| Description: | Mycotoxins are extracted according to the European Norm EN 15662:2008 (QuEChERS protocol) [1] with some modifications. The protocol involves an initial single phase extraction with water and acidified acetonitrile, followed by liquid-liquid partitioning by addition of magnesium sulphate and sodium chloride. The resulting acetonitrile supernatant obtained is then defatted with hexane. Depending on the mycotoxin/matrix combination and the sensitivity required for AFLAs and OTA, the sample extracts are then submitted to two different clean-up procedures, named QuEChERS and IAC: |
| Sample Weight Required: | 120 g |
| Method Reference: | - |
| Analytical Platform: | LC-MS/MS |
| Special Information: | LOQ is dependent of matrix. Method accredited ABNT ISO 17025: 2017. |

| Analyte Reported | Alias | Unit of Measure | Typical Limit of Quantification | Uncertainty |
|------------------|-------|-----------------|---------------------------------|-------------|
| Aflatoxin B1 | - | µg/kg | 0.05 | < 50 % |
| Aflatoxin B2 | - | µg/kg | 0.05 | < 50 % |
| Aflatoxin G1 | - | µg/kg | 0.05 | < 50 % |
| Aflatoxin G2 | - | µg/kg | 0.05 | < 50 % |
| Fumonisin B1 | - | µg/kg | 50 | < 50 % |
| Fumonisin B2 | - | µg/kg | 50 | < 50 % |
| Deoxynivalenol | - | µg/kg | 50 | < 50 % |

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|-------------|---|-------|-----|--------|
| T-2 | - | µg/kg | 5.0 | < 50 % |
| HT-2 | - | µg/kg | 5.0 | < 50 % |
| Ocratoxin A | - | µg/kg | 0.5 | < 50 % |
| Zearealone | - | µg/kg | 4.0 | < 50 % |
| Nivalenol | - | µg/kg | 100 | < 50 % |