

For LabSolutions™ LCMS

LC/MS/MS Method Package for Bile Acids Ver. 2



Ready-to-use method for analysis of 49 Bile Acids

This Method Package allows comprehensive analysis of 49 Bile Acids from plasma, urine and feces.

Bile Acids are essential for cholesterol metabolism and play a key role in absorption of fats in the small intestine. Additionally, they serve as signaling molecules that regulate metabolism. Their concentrations are used as markers of several diseases. Acute and chronic liver failure concern more than 12 million people worldwide, estimated by the World Health Organization, accounting for approximately 2 million deaths per year. Blood enzyme activity test (ALT, AST, etc.) and total bile acids assay (TBA) are widely conducted as examinations for the early diagnosis of liver diseases and liver function evaluation. More recently, monitoring of individual bile acids (IBA) was proposed for deeper pathologies characterization. However, bile acids wide structural diversity, associated with chemical similarities, leads to great challenges to analyze them.

This Method Package was developed to provide users a complete solution to perform routine analysis of selected primary, secondary and conjugates bile acids, in various matrices such as plasma, urine and feces.

Complete Solution from Sample Preparation to Result for Routine Analysis



LC/MS/MS Method Package Bile Acids Ver. 2

- Example pretreatment protocols (including automation) for plasma, urine and feces samples,
- Robust chromatographic conditions for separation of isobaric species within a 10-min acquisition time,
- Optimized MS/MS parameters for all targeted bile acids and their conjugates (up to 3 MRM transitions),
- Optimized MS/MS parameters for 10 commercially available internal standards, covering all classes,
- Ready to use method files for LCMS-8050/8060 and LCMS-8060NX,
- Instruction manual for method installation.

LC/MS/MS Method Package Bile Acids Ver. 2

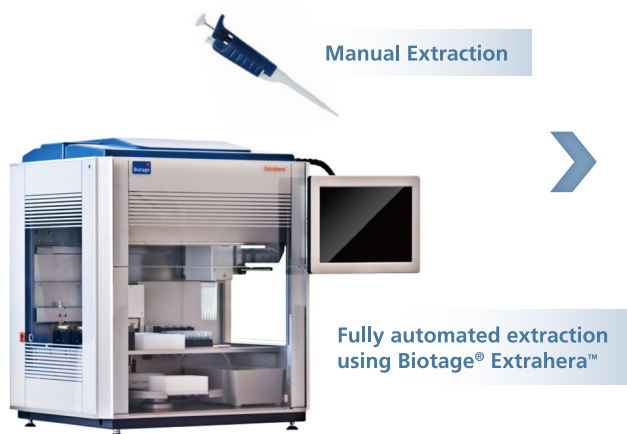
Complete Solution from Sample Preparation to Result

Select best Sample Pretreatment for your needs

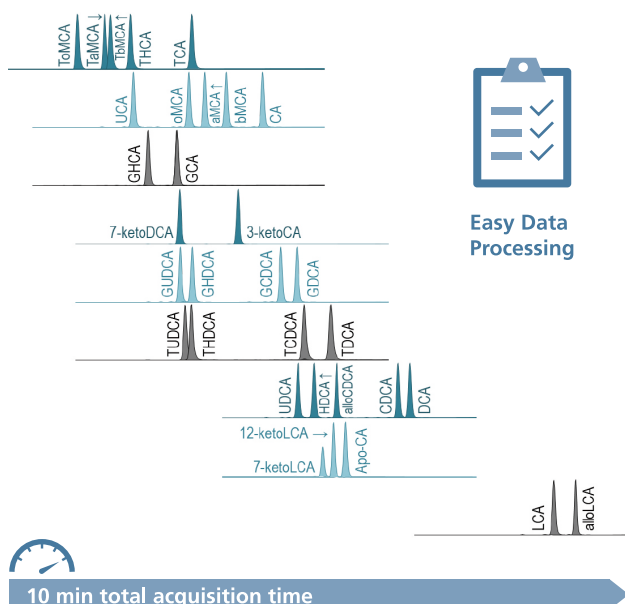
Example pretreatment protocols are detailed in the method package manual, for plasma, urine and feces samples.

Ready-to-use LC/MS/MS Method

The Method Package can be directly used on Shimadzu UFMS mass spectrometers LCMS-8050/8060 and LCMS-8060NX.



LCMS-8060NX



Easy Data Processing using LabSolutions Insight™

The target compound list can be customized to fit the user's needs. In addition, with LabSolutions Insight the user can easily review the results and quickly extract the necessary information with advanced flagging functions.

LC/MS/MS Method Package Bile Acids Ver. 2

| | | |
|-----------------------------|-------------------------------|----------------------------------|
| 12-Ketodeoxycholic acid | Glycocholic acid | Taurocholic acid-D4 |
| 3-Ketocholic acid | Glycocholic acid-D4 | Taurodeoxycholic acid |
| 7,12-Diketolithocholic acid | Glycodeoxycholic acid | Taurohyocholic acid |
| 7-Ketodeoxycholic acid | Glycodeoxycholic acid-D4 | Taurohyodeoxycholic acid |
| 7-Ketolithocholic acid | Glychoyocholic acid | Tauroolithocholic acid |
| Allochenodeoxycholic acid | Glychoyodeoxycholic acid | Tauroolithocholic acid-D4 |
| Allolithocholic acid | Glycolithocholic acid | Tauroursodeoxycholic acid |
| Apocholic acid | Glycolithocholic acid-D4 | Tauro- α -muricholic acid |
| Chenodeoxycholic acid | Glycoursodeoxycholic acid | Tauro- β -muricholic acid |
| Chenodeoxycholic acid-D4 | Hyodeoxycholic acid | Tauro- ω -muricholic acid |
| Cholic acid | Lithocholic acid | Ursocholic acid |
| Cholic acid-D4 | Lithocholic acid-D4 | Ursodeoxycholic acid |
| Dehydrocholic acid | Norcholic acid | α -Muricholic acid |
| Dehydrolithocholic acid | Norursodeoxycholic acid | β -Muricholic acid |
| Deoxycholic acid | Taurochenodeoxycholic acid | ω -Muricholic acid |
| Deoxycholic acid-D4 | Taurochenodeoxycholic acid-D4 | |
| Glychenodeoxycholic acid | Taurocholic acid | |

Remarks and Precautions

LabSolutions LCMS Ver. 5.995P2 or later is required.

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