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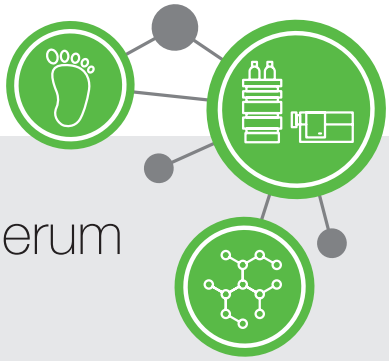


Histamine and 1-methylhistamine in Serum LC-MS/MS Analysis Kit

Histamine intolerance is a disorder of histamine homeostasis due to decreased intestinal degradation of this amine; it is mainly caused by a deficiency of the enzyme diamine oxidase, which leads to its accumulation in plasma and the development of adverse health effects. Two metabolic pathways are known for histamine in humans. Histamine-N-methyltransferase is the enzyme responsible for the ring methylation of histamine, found primarily in the liver and kidney, and ultimately converts histamine to 1-methylhistamine.

Highlights of the Analysis Kit

- Just a few pipetting steps for the sample preparation; for urine "**protein crash and shoot**"
- Total run time is 6.5 min.
- Use of stable isotope labeled internal standard
- Small volume of patient's sample is required
- Long life span of HPLC column

Parameters

Histamine and 1-methylhistamine

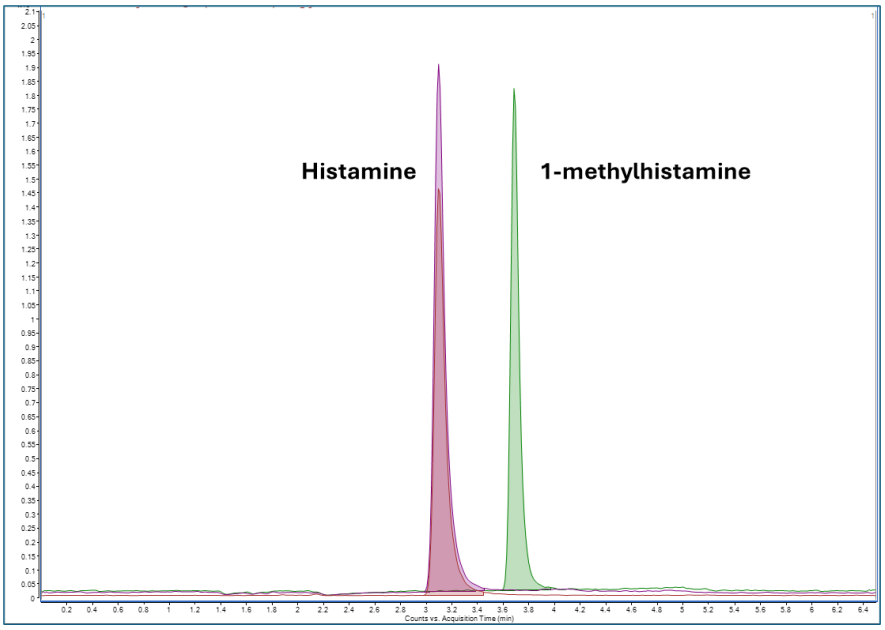
Sample Type

Serum

Sample Preparation

1	Pipette 50 µL of calibrator/control/serum sample into a glass centrifuge tube
2	Then, add 50 µL of internal standard and 600 µL of Reagent-1 respectively, vortex 5 sec. then, centrifuge at 4000 rpm for 5 min.
3	Decant the clear supernatant into a HPLC vial prior to injection

Example Chromatogram



Total ion chromatogram of histamine and 1-methylhistamine

Method Performance

All validation results were obtained using Agilent 6465 TQ (Ultivo) system

Analyte	LOQ (ng/ml)	Linearity (ng/ml)	Recovery		Repeatability			
					intra-day		inter-day	
			LLQC* (%)	HLQC** (%)	LLQC (%CV)	HLQC (%CV)	LLQC (%CV)	HLQC (%CV)
Histamine	0.26	0.5 – 25.0	104	103	5.41	2.07	5.74	3.40
1-Methylhistamine	0.23	0.5 – 25.0	102	111	4.68	2.64	4.82	3.69

* LLQC: Low-level quality control
** HLQC: High-level quality control

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