

## Amino acids, Polyamines (particularly Histamine)

### Description

Nitrogenous compounds like amino acids and polyamines are partly built in the plant itself, partly produced during the fermentation. Some of them like histamine or generally polyamines are considered to be hazardous to health. They come along the decomposition of biological products. As an example we'd like to mention the development of histamine from the amino acid histidine. That is the reason why the determination of the polyamines and particularly of histamine is of highest interest, especially because their hazardous behavior such as headache or even allergic reactions.

Amino acids and polyamines can be derivatized in wine quite easily and with little sample preparation with o-phthalaldehyde (OPA). The separation and detection as well as quantitation of these derivatives is made with high pressure liquid chromatography (HPLC) in a gradient mode.

### The strong points of the method

The determination of histamine gained more importance in the last past few years. Because of allergic reactions are increasing, the consumers request more severe criteria concerning the concentration of histamine in food. Many exporting countries require from local suppliers an analysis of histamine with partly very low limits.

The average value is for white wines normally under 3-4 mg/L, for red wines under 15 mg/L. Such low concentrations require a sample preparation, where histamine is enriched and separated from disturbing related compounds in the matrix. SunChrom developed a precise working instruction and offers a complete histamine determination system.

Below two chromatograms of a white (Fig. 1) and a red wine (Fig. 2) are displayed. Due to the optimized sample preparation no or few other peaks can be recognize by wine matrix.

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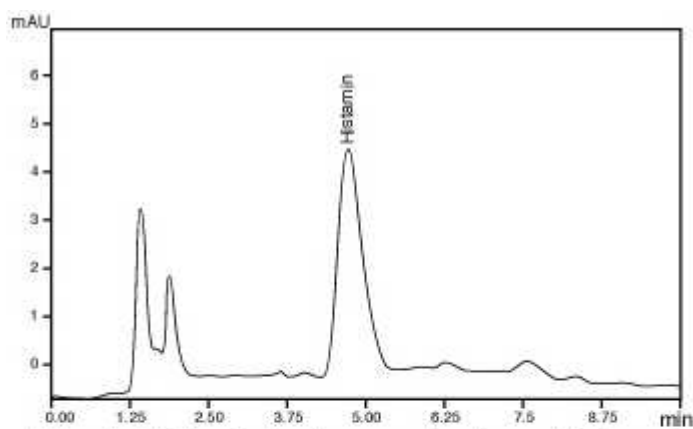


Fig. 1 – Determination of histamine in a white wine after pre-column derivatisation with OPA

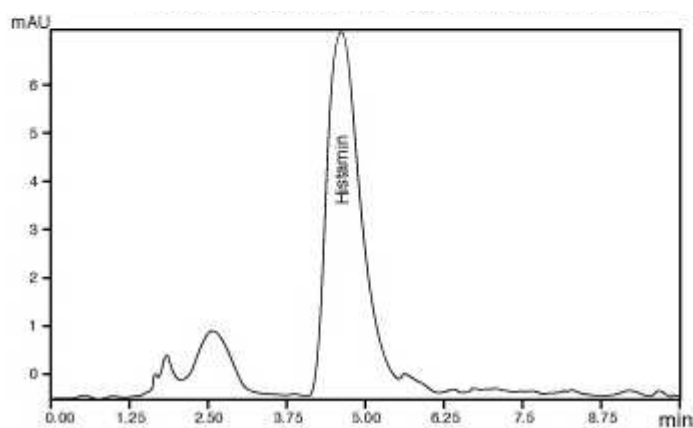


Fig. 2 – Determination of histamine in a red wine after pre-column derivatisation with OPA

## Ordering information

Art.-No.	Short description
458-190.006	complete system for determination of amino acids, polyamines, particularly of histamine
969-190.116	pre-column cartridges 4 x 10 mm (5)
969-190.204	special main column 50 x 4,6 mm
969-190.112	cartridge holder
969-190.115	cartridge holder (sleeve nut with holder and union)
969-190.320	SS sieves, 5 µm (10)
969-190.321	Teflon seals (10)
969-190.325	glass fiber filters (10)
969-190.332	SS frit 1,9 mm with PEEK ring 0,25" OD
969-190.333	SS frit 4,6 mm with PEEK ring
969-190.340	capillary connecting piece 25 cm
969-190.341	capillary connecting piece 10 cm
969-195.425	PEEK capillary 1/16" x 0,25 mm (1 m)
969-195.522	PEEK finger tight fitting
189-7750-038	stator for injection valve 7739 (new)
189-7750-016	rotor seal for injection valve 7739
458-195.038	stator for 7739 – replacement part -

We reserve the right to change specifications, design or price without advance notice.