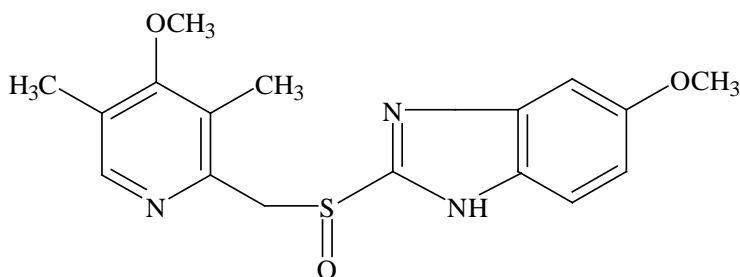


Analysis of omeprazole, used for the treatment of gastric and duodenal ulcers

Omeprazole is a drug that inhibits acid production, it is used in the treatment of stomach ulcers, duodenal ulcers, and reflux esophagitis. This application note presents a method for the extraction of omeprazole from serum using InertSep Phama and measurement with LC-MS/MS.

1. Flow diagram of solid phase pretreatment

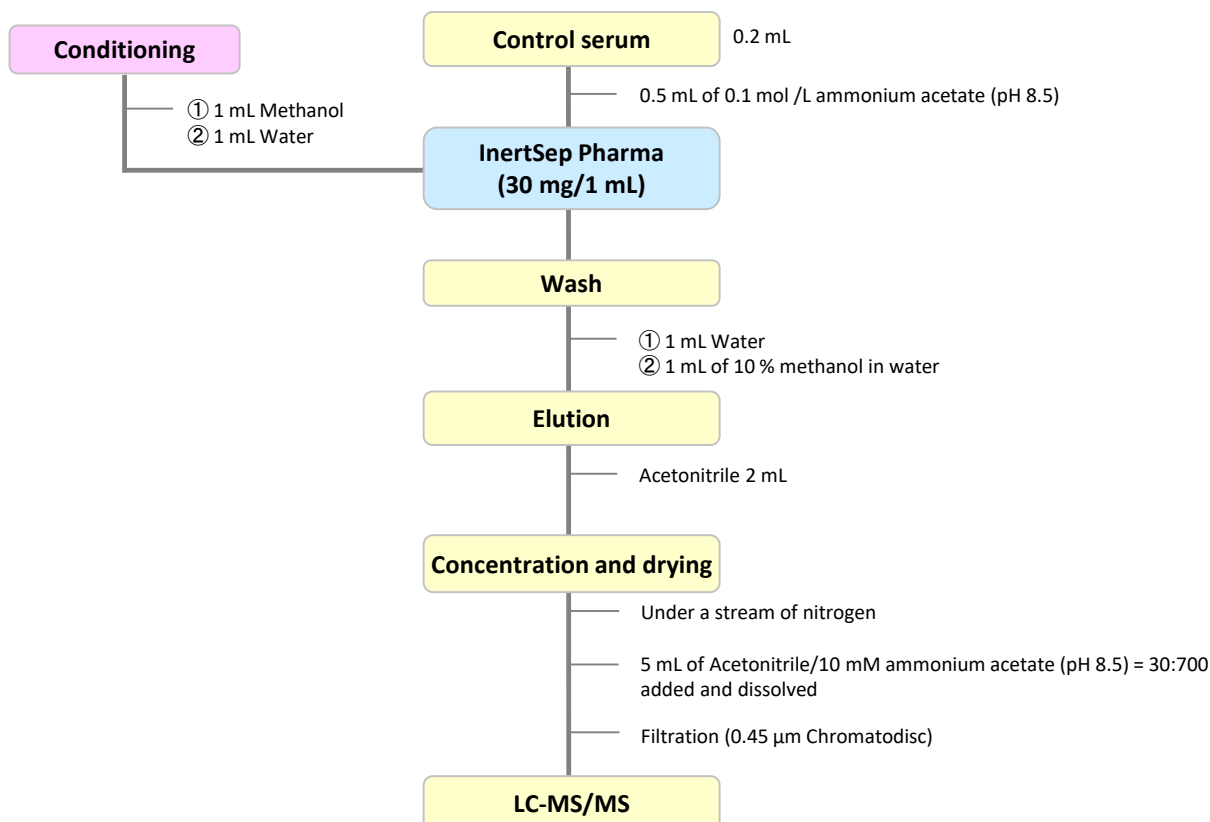
[Structure of omeprazole]



Omeprazole

Structures are created using Chemistry 4-D Draw which is provided by ChemInnovation Software, Inc.

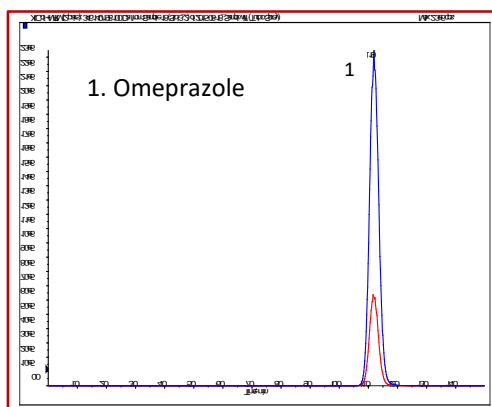
[Example of omeprazole pretreatment]



NOTE) This is a method developed by GL Sciences based on literature information.

2. Measurement conditions

Example: measurement of standard



HPLC conditions

Column : InertSustain C18 (5 μm , 150 x 2.1 mm I.D.)

Eluent : A) CH_3CN
: B) 10 mM HCOONH_4 in H_2O (pH7.6)
A/B = 30/70, v/v

Flow rate : 0.2 mL/min

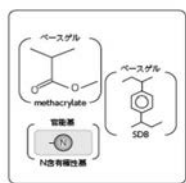
Column temperature : 30 $^\circ\text{C}$

Detection : LC-MS/MS
(API 4000 : ESI, Positive, MRM)

3. Measurement-related products

Solid-phase extraction column

[InertSep Pharma]



Mean particle size : 30 μm
Surface Area : 600 m^2/g
Pore volume : 1.1 mL/g
Pore size : 70 \AA
PH range of use : 1 - 14

InertSep Pharma is a complex polymer solid phase of N-containing methacrylate and styrene divinylbenzene. This is a reversed-phase polymer solid phase dedicated to pharmaceutical analysis developed for simultaneous screening of pharmaceutical compounds in biological materials.

| Product name | Column size | Qty. | Cat.No. |
|-----------------|-------------|-------------|------------|
| InertSep Pharma | 30 mg/1 mL | 100 bottles | 5010-27100 |

Chromatodisk

[GL chromatodisk]

A hydrophilic PTFE filter that can be used without pre-wetting in either aqueous or non-aqueous systems, with solvents of up to 100 % aqueous or acetonitrile.

| Product name | Model | Diameter (mm) | Pore Size (μm) | Qty. | Cat.No. |
|------------------------|-------|---------------|-----------------------------|------|------------|
| Water/non-water (also) | 4P | 4 | 0.45 | 100 | 5040-28540 |

HPLC column

[InertSustain C18]



High purity spherical
Silica gel : silica gel (ES silica)
Surface Area : 350 m^2/g
Pore size : 100 \AA
Pore volume : 0.85 mL/g
End capping : Yes
Carbon : 14 %
U S P Code : L1
Recommended pH range for use : 1 - 10

InertSustain C18 is an ODS column that can be used with 100 % aqueous eluents. It was developed by pursuing inertness and chemical stability using GL Sciences' proprietary synthetic technology.

| Product name | Particle size | Inside diameter | Length | Cat.No. |
|------------------|-----------------|-----------------|--------|------------|
| InertSustain C18 | 5 μm | 2.1 mm | 150 mm | 5020-07315 |

GL Sciences disclaims any and all responsibility for any injury or damage which may be caused by this data directly or indirectly. We reserve the right to amend this information or data at any time and without any prior announcement.

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