Analysis of Kasugamycin

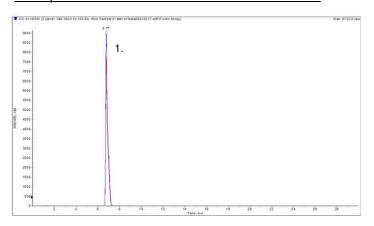
Kasugamycin is widely used as an agricultural fungicide. In this study, kasugamycin added to "brown rice", "orange", and "peanut" extracts was extracted and purified using a mixed-mode polymer solid-phase (InertSep MCX FF) with reference to a method complied with the notification test method of the Ministry of Health, Labor and Welfare. Analysed by LC / MS / MS.

Flow Chart of Solid Phase Pretreatment *Cereals, legumes and nuts 10.0g Fruits and vegetables 20.0g Sample 10.0 g* Purified water 20 ml Tea and hops 5.0s (Cereals, legumes and nuts, tea, hops) Stand for 30 min. Ethanol: 2 vol% acetic acid (1: 1) 100 mL Homogenize Filter Residue Ethanol: 2 vol% acetic acid (1: 1) 50 mL Homogenize Filter Made up a volume Ethanol: 2 vol% acetic acid (1: 1) to 200 mL Fractionate 5mL **Addition of** Conditioning standard solution for recovery test Methanol 10 mL Purified water 10 mL InertSep C18 InertSep MCX FF (500 mg / 20 mL) (1 g/20 mL) Easy to operate The wide diameter makes it easy Washing to put in the solution. Purified water 15 mL A sufficient volume can be secured Made up to Purified water without connecting an empty reservoir. MCX a volume of 50mL Less prone to clogging Conditioning Due to the large wetted area, it will not *20 mL of fruits and vegetables Fractionation of 40mL* suffer from clogging or deterioration in Methanol 10 mL liquid permeability. Purified water 10 mL InertSep MCX FF Easy liquid permeability (500 mg/20 mL) Dramatically improves liquid permeability. Washing Purified water 10 mL Test result for collection of the extracted liquid Methanol 10 mL Rec (%) C.V. (%) **Elution** Ammonia water / methanol Brown rice 99.4 6.2 (1:19) 15 mL **Concentration to** Orange 95.3 6.4 dryness Peanut 89.7 5.3 Made up to Methanol $(0.5 \text{ mg/kg}, n=3 \times 2 \text{ days in the sample})$ a volumme of 1mL

LC/MS/MS

2. Measurement Conditions

Example for measurement of standard solution



HPLC conditions

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

Eluent : A) 0.1 % HCOOH in H₂O

B) CH₃CN

Time (min)	Α%	В%
0.0	20	80
5.0	50	50
15.0	50	50

Flow rate : 0.3 mL/min

Column temperature : 40 °C

Detection : LC-MS/MS

(4000QTRAP: ESI, Positive, SRM)

Injection Vol. : $5 \,\mu L$

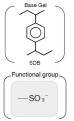
Sample : 1.kasugamycin Q1/Q3=380/112 (Quantitation ions)

380/200 (Reference ions)

(100 µg/L)

3. Related Products

[InertSep MCX FF]



Average particle size : 70 μm

Surface area : 480 m³/g

Pore volume : 1.1 mL/g

Pore size : 9 nm

pH range : 1~14

[InertSep C18]

 $Si-(CH_2)_{17}CH_3$

InertSep MCX FF is a styrenedivinylbenzene polymer (SDB) solid phase modified with a strong cation exchange group. By exerting both a reverse-phase and cation exchange action, basic compounds can be strongly retained, It is extremely effective for the separation of acidic and neutral contaminants. Since the particle size is as large as 70um, it is ideal for biological sample extracts.

Description	Column size	Q'ty /pkg	Cat.No.
InertSep MCX FF	500 mg/20 mL	20 pcs	5010-62704

InertSep C18 is a solid-phase with a non-polar interaction in which octadecyl groups are chemically bonded to silica gel. An advanced end-capping process suppresses the cation exchange interaction of the free silanol groups, resulting in less adsorption of basic compounds. Suitable as a clean-up solid-phase for degreasing in the simultaneous test method for residual pesticides.

Description	Column size	Q'ty /pkg	Cat.No.
InertSep C18	1 g/20 mL	20 pcs	5010-61014

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.

GL Sciences Inc. Japan

22-1 Nishishinjuku 6-chome Shinjuku-ku, Tokyo 163-1130, Japan

Phone: +81-3-5323-6620

Fax: +81-3-5323-6621

Email: world@gls.co.jp

Web: www.glsciences.com

GL Sciences Inc. USA

4733 Torrance Blvd. Suite 255 Torrance, CA 90503 USA

Phone: +1-310-265-4424

Fax: +1-310-265-4425

Email: info@glsciencesinc.com

Web: www.glsciencesinc.com

GL Sciences B.V.

Dillenburgstraat 7C 5652AM, Eindhoven The Netherlands

Phone: +31-40-254-9531 Email: info@glsciences.eu Web: www.glsciences.eu

GL Sciences (Shanghai) Limited

Tower B, Room 2003
Far East International Plaza
No.317 Xianxia Road, Changning District
Shanghai, China 200051

Phone: +86-21-62782272

Email: contact@glsciences.com.cn Web: www.glsciences.com.cn

