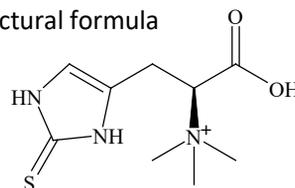


This time, the analysis of ergothioneine, a type of amino acid is presented. Ergothioneine whose antioxidant effect is said to be about 7,000 times larger as compared with vitamin E is known to be contained in various species of mushrooms.

Ergothioneine contained in dried shiitake mushroom was successfully measured by using InertSustain PFP, but without using ion-pairing reagent requiring a long time for equilibrating.

(K. Suzuki)

Structural formula

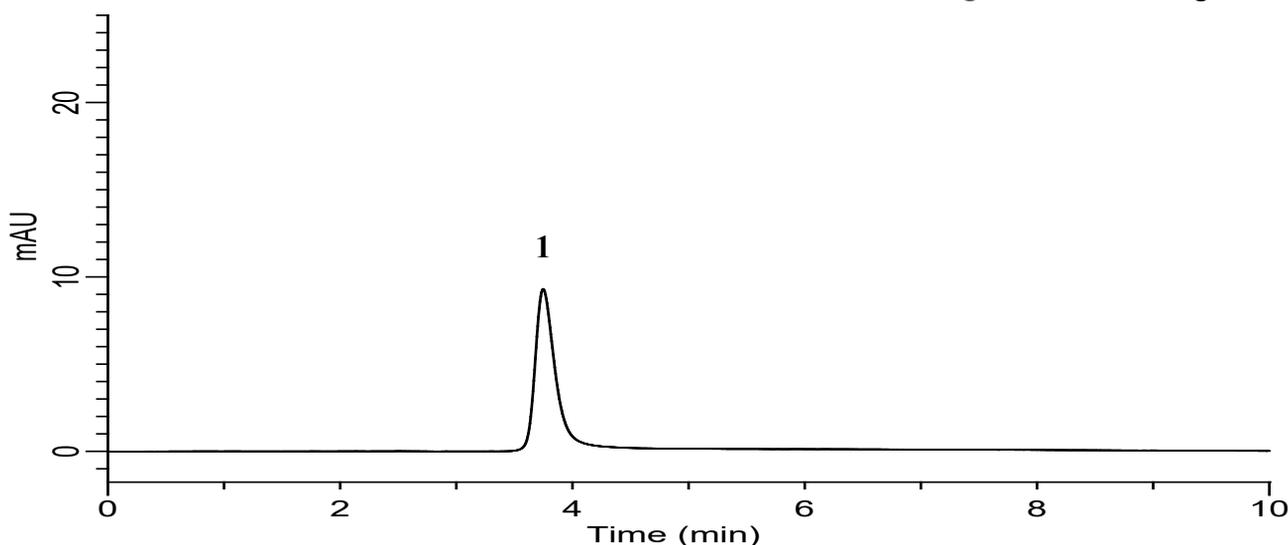


Ergothioneine

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

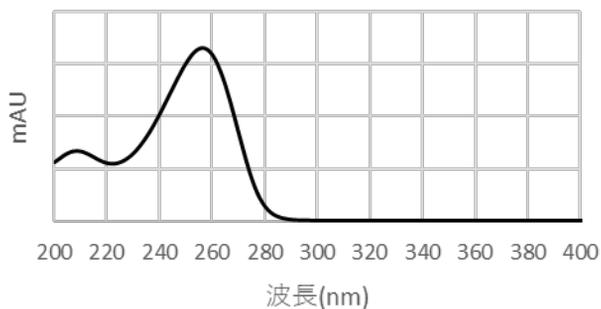
Standard Solution

1. Ergothioneine 10 mg/L

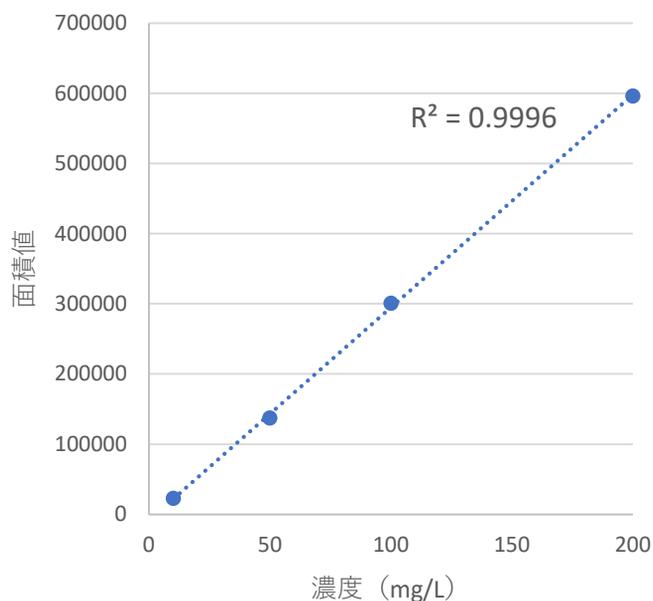


HPLC Conditions

Column	: InertSustain PFP (5 μ m, 150 \times 4.6 mm I.D.)
Cat. No.	: 5020-87730
Eluent	: 0.05 % CH ₃ COOH in H ₂ O
Flow rate	: 1.0 mL/min
Column temperature	: 40 $^{\circ}$ C
Detection	: UV 250 nm (DAD)
Injection volume	: 20 μ L



UV spectrum

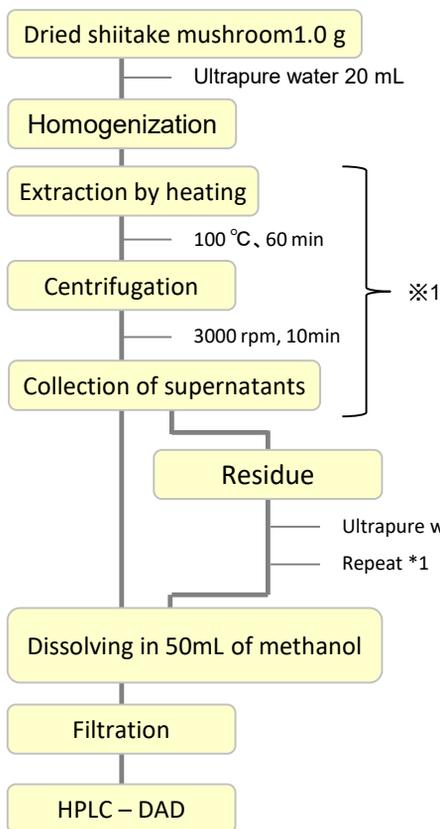


Calibration curve

Analysis Example

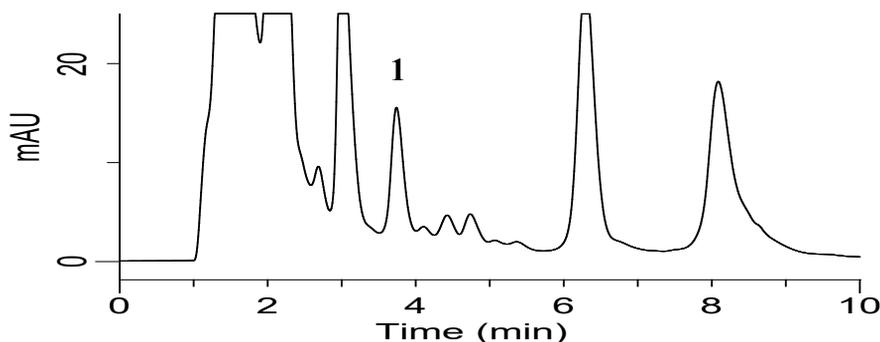
By using DigiPREP Jr., the sample was extracted by heating and adjusted for measurement. The ODS column is weak in retention and difficult in separation, but by using InertSustain PFP, it is confirmed that it can separate successfully.

Example of Pretreatment

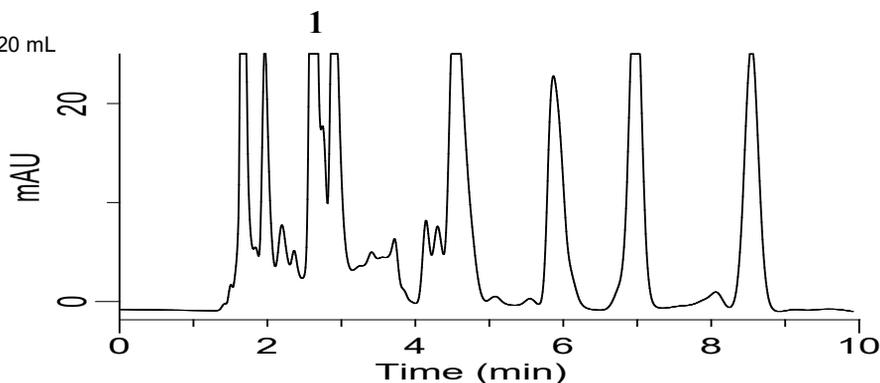


InertSustain PFP

1. Ergothioneine



Other Brand ODS column (AQ type)



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