

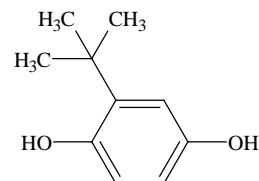
# Analysis of Tert Butylhydroquinone (TBHQ) in Foods by HPLC

This application describes the analysis of tert butylhydroquinone (TBHQ). Although TBHQ is not recognized as a food additive, it is used as a phenolic antioxidant in oils and fats in some countries. The test method is described in Food Safety Inspection Notification No. 0303001.

In this application, sample analysis was made using a fluorescence detector in accordance with the test method.

It is also possible to analyze phenolic antioxidants simultaneously using gradient separation. (K.Suzuki)

## Structural formula



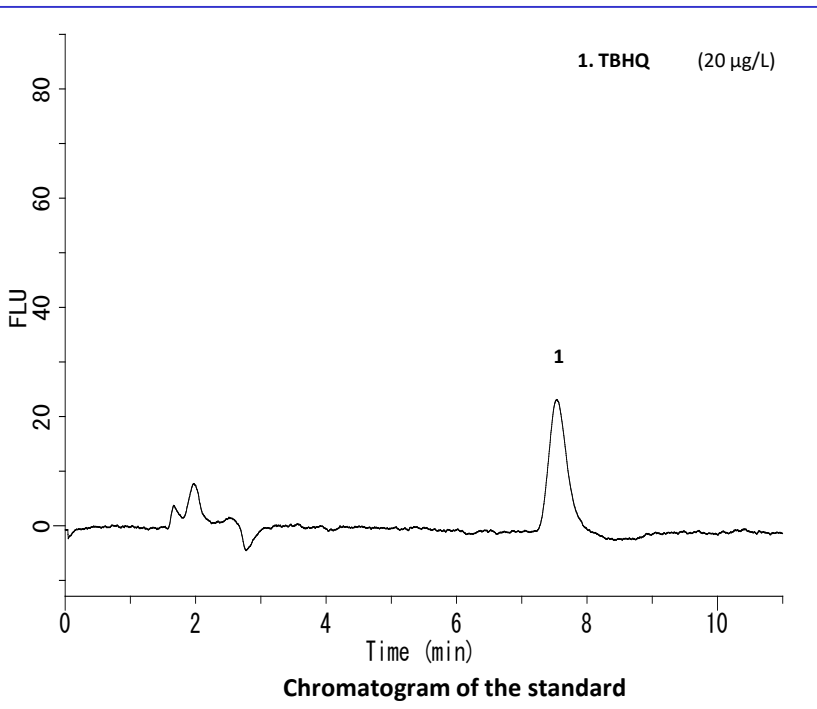
Tert-Butylhydroquinone

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

## <Representative phenolic antioxidants>

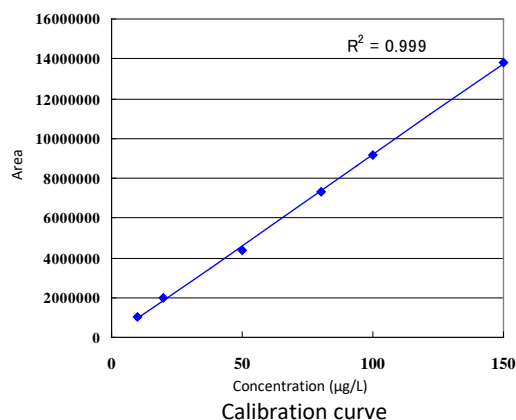
Dibutylhydroxytoluene (BHT)	Octyl Gallate (OG)
Dibutylhydroxyanisole (BHA)	Lauryl gallate (DG)
Nordihydroguaiaretic acid (NDGA)	Propyl gallate (PG)
2,4,5-trihydroxybutyrophenone (THBP)	
4-Hydroxymethyl-2,6-di-tert butylphenol (HMBP)	

## Examples of TBHQ analysis

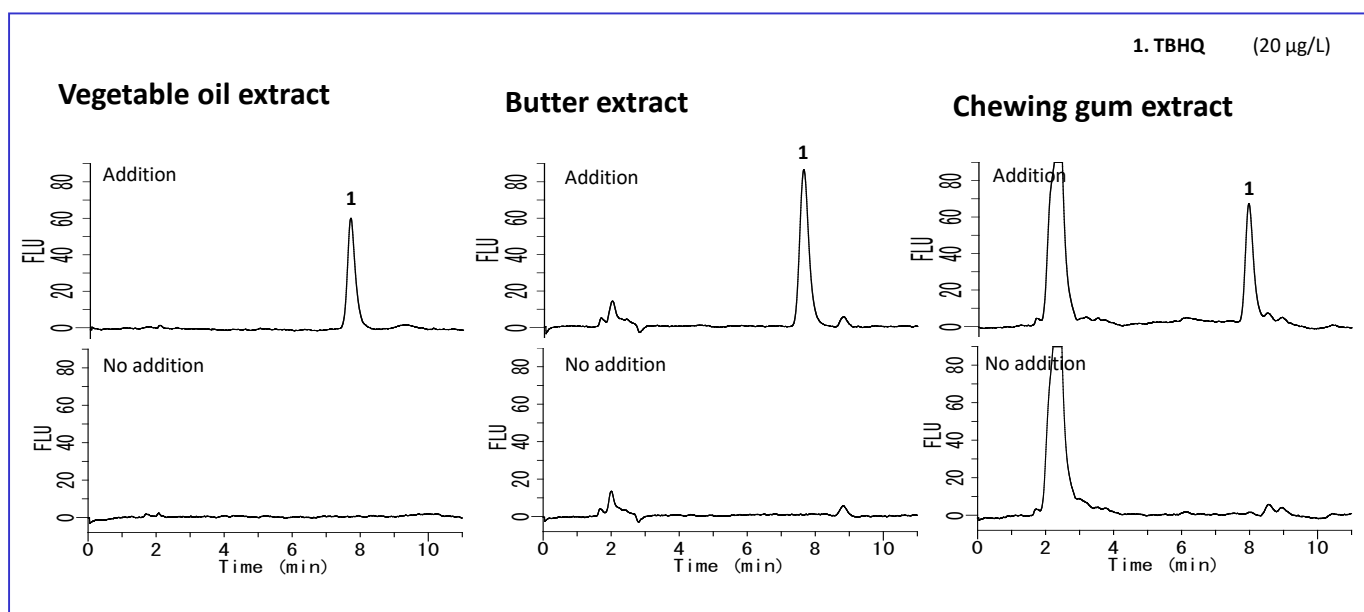
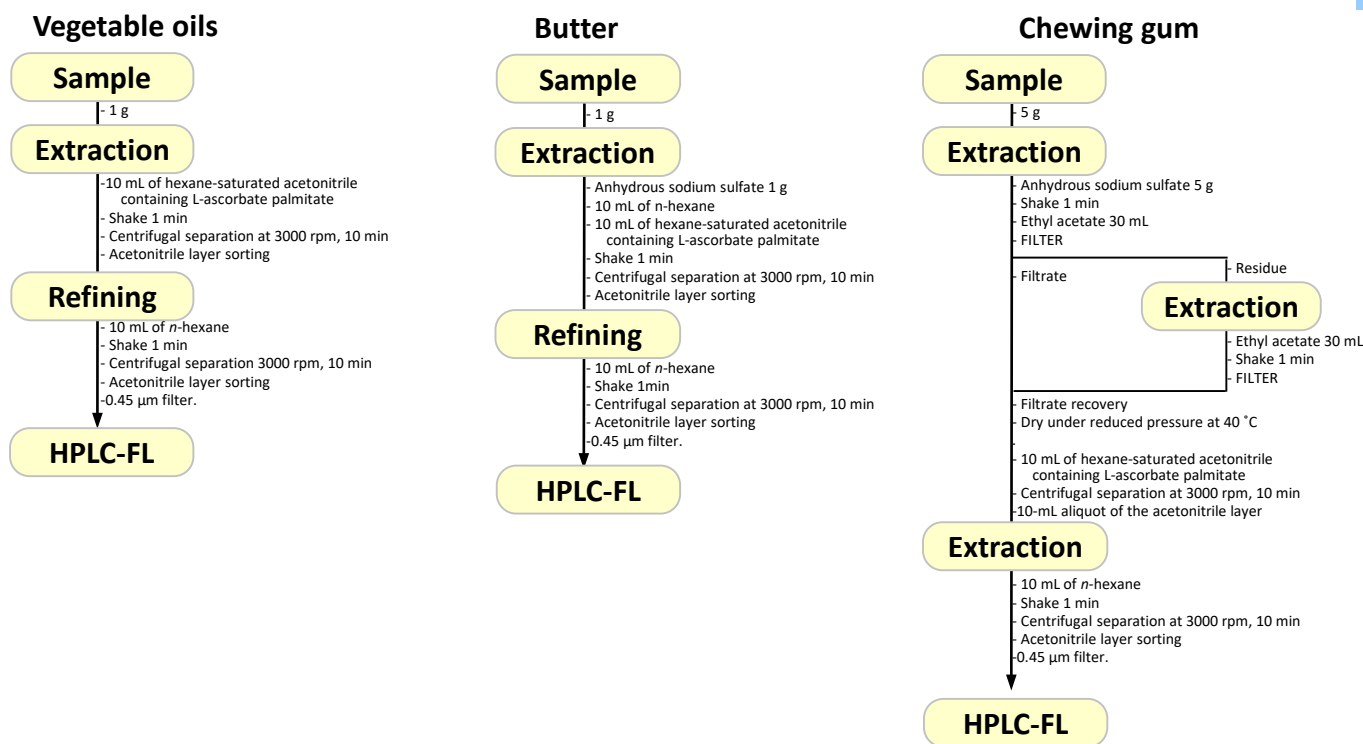


## HPLC conditions

<b>Column</b>	:Inertsil ODS-SP (5 µm, 150 x 4.6 mm I.D.)
<b>Eluent</b>	: A) CH <sub>3</sub> CN B) CH <sub>3</sub> OH C) 5% aqueous acetic acid A/B/C = 20/20/60 v/v/v, 1.0 mL/min
<b>Temperature</b>	:40 °C
<b>Detector</b>	: FL Ex 293 nm Em 332 nm
<b>Injection volume</b>	: 10 µL



## Example of pretreatment



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