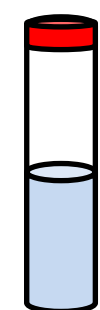


Absolute Quantification by Quantitative NMR (qNMR)

Features

- Absolute quantification is not affected by impurities
- Capable of purity determination even for a compound without a reference material
- Highly reliable analysis method adopted as a standard method

Analysis Procedure



Sample

Substance to be measured
+
Internal standard for qNMR



NMR Machine

Application of Standard Method

[Reagents such as crude drugs for component quantitative determination in the Japanese pharmacopeia]

- 16th revision Japanese pharmacopeia second supplement (2014)
"Geniposide", "Paeonol", "Magnolol", "Magnoflorine Iodide"

[Japanese Standards of Food Additives]

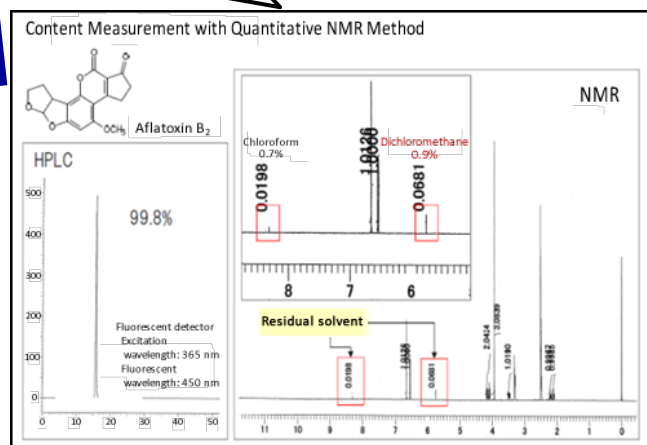
- Official Gazette. Extra 49th. March 12, 2013 "Azoxystrobin"
- Official Gazette. Extra 171st. August 6, 2013 "Pyrimethanil"

A calibration curve for quantification is not necessary!
Measurement takes about 20 minutes to complete.

A residual solvent easily missed in chromatography
can be confirmed in qNMR!

Why is Absolute Quantification Possible?

The mole ratio between molecules can be confirmed by directly comparing the atomic nuclei constituting the molecules.
→ This principle makes quantification possible.
Furthermore, SI traceable quantitative analysis is possible using the internal standard with SI traceability.



Measurement Result

Product List of Internal Standard for qNMR

Wako Cat. No.	Product Name	Grade	Pkg. Size
024-17031	1,4-BTMSB-d4 Reference Material	TraceSure	50 mg
044-31671	DSS-d6 Reference Material	TraceSure	50 mg
048-33271	Dimethyl Sulfone Reference Material	TraceSure	100 mg
135-17951	Maleic Acid Reference Material	TraceSure	100 mg
093-06731	4 Internal Standard Set for Quantitative NMR	for qNMR	1 set