

Lithium Assay LS

For more information : http://www.funakoshi.co.jp/exports_contents/46145

Lithium in Serum / Plasma can be measured by microplate reader!

Background

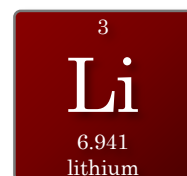
Lithium is known to be related to the stimulation or suppression of the release of Serotonin, Dopamine, and Adrenaline from neuronal cell. This causes 1) increase numbers of White Blood Cell, 2) lowering blood-pressure, and 3) effect for reproduction.

In medication, lithium carbonate are being used for treatment of bipolar disorder as the lithium donor. However, lithium carbonate is absorbed by a gastrointestinal and overdose of a lithium may cause nephropathy and other critical side effects. Therefore, supervised administration of lithium carbonate is required and important. Serum lithium levels higher than 1.5 mM indicate a significant risk of intoxication.

Recently, lithium effects for the oxidative stress-induced diseases has been reported. Therefore, researches about the effect of lithium based drugs against other diseases are reconsidered.

Features

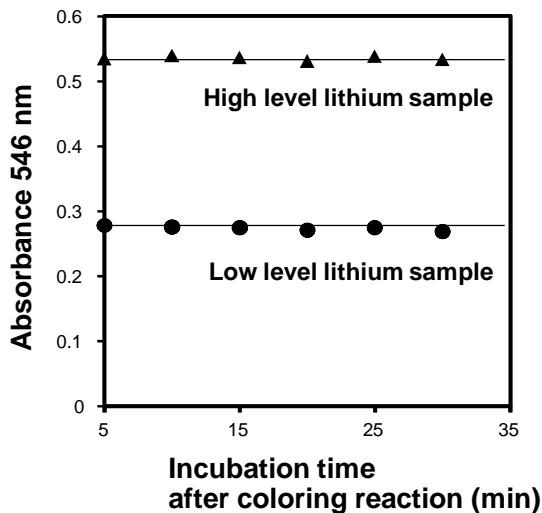
- Using conventional microplate reader for the assay. No gas barrier equipment is required.
- High throughput measurement by **using microplate reader**.
- **High correlation** with the result of Atomic Absorption Spectrometry (AAS).
- Sample pre-treatment is not required.
- Kit does not contain any hazardous components like cyanide or azide as preservative.
- 1 point calibration - do not need multiple point measurement to make standard curve ($r^2=0.9999$).
- The absorbance after coloring reaction is stable for at least 30 minutes.
- Lithium (Li^+) and Lithium Carbonate (Li_2CO_3) can be measured.
- You can get assay results just in **10 minutes** !
- All animal species samples can be measured.
- Patented technology : JAPAN : Patent. No.5100903, INTERNATIONAL : PCT/JP2012/61015



Assay Specification

- Samples : Serum, Plasma (Heparin Lithium contained samples cannot be used.)
- Assay range : 0.03 - 3.0 mM
- Measuring absorbance (Main / Correction) : 550 nm / 600 nm (600 nm - 610 nm)

Key points of this Assay



The absorbance after coloring reaction in proposed reagent is stable for at least 30 minutes.

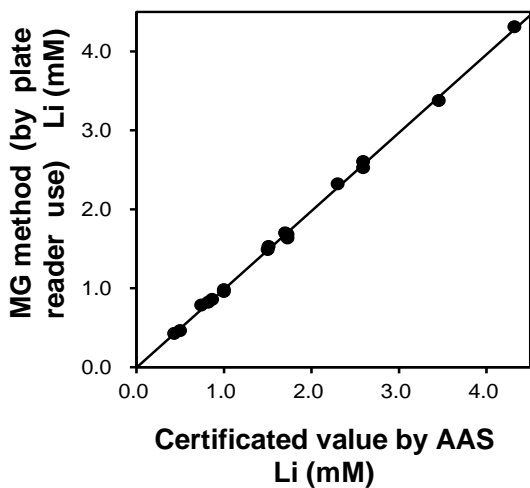
Wavelength: 546 nm (main), 600 nm (sub)

Sample : Li_2CO_3 added serum

Apparatus : CORONA SH-1200
(Micro-titer plate reader)

1-pointend method, at room temperature

N=3, S.D= less than 0.005 (Abs)



Good correlation between MG-method (Y) result and a obtainable method (X) result

Regression equation

$$Y = 0.992x - 0.005, r^2 = 0.9994$$

17 Control serum were used as specimen

【Roche】 Cfas II, Precinorm U, Precipath U,

【Sero】 Pathonorm H, Autonorm, Seronorm,

Seronorm Human,

Seronorm Pharmaca L1

Seronorm Pharmaca L2

【Other】 Lithium added serum

(Serum base: Pathonorm L)

AAS : Atomic Absorption Spectrometry



Product Information



[Manufacturer : AKJ]

Product Name	Size	Catalog #	Storage
Li Lithium Assay kit LS - Polyfluoroporphyrin Method	100 tests	LI01ME	4°C

NOTE

※ All products here are research use only, not for diagnostic use.
※ Specs might be changed for improvement without notice.

※ Company name and product name are trademark or registered mark.
※ Please contact your local distributors for orders, quote request and inquiry.

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