



Accurate and stable creatinine reagent

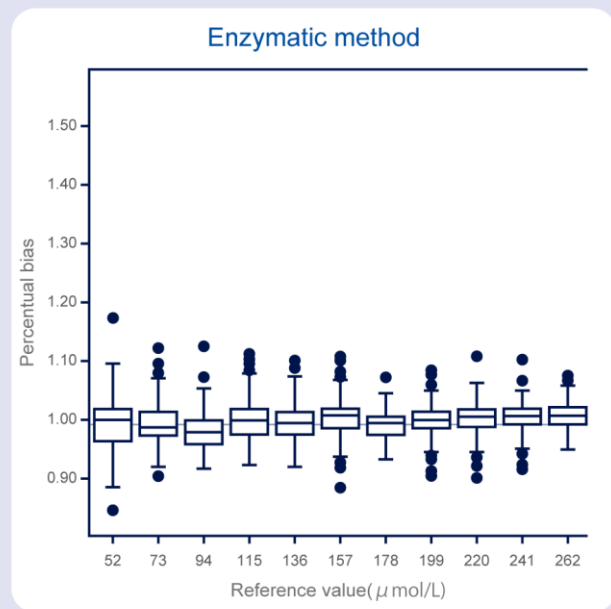
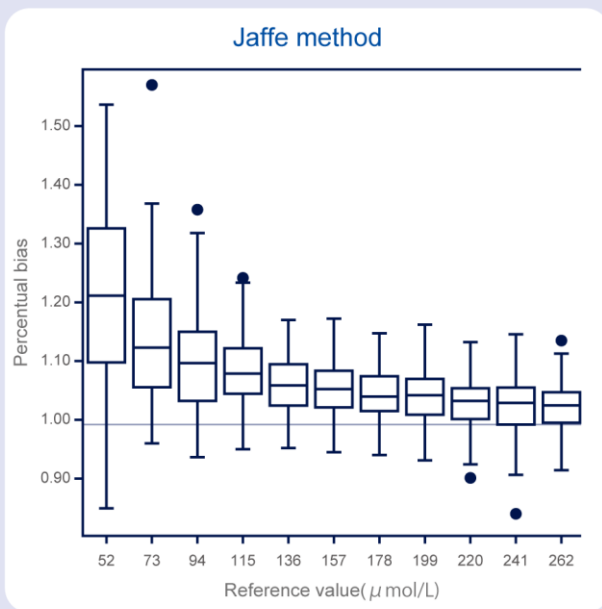
Serum creatinine is crucial in glomerular filtration rate (GFR) estimation.

There are two methods for determination, Jaffe and Enzymatic.

However, the Jaffe method is unstable and has much influence.

So, why not use an accurate and stable Enzymatic reagent to evaluate GFR?

The percentual bias of the Jaffe and Enzymatic method *



* BMC Nephrology, 13:133, 2012

They measured value-assigned creatinine specimens in the range 52-262 μmol/L using Jaffe and Enzymatic methods.

The Jaffe method tends to overestimate creatinine at low concentrations:

21%, 12%, 10% for the creatinine target value 52, 73 and 94 μmol/L near normal values of creatinine.

However, the Enzymatic method has only small bias and provides stable results.

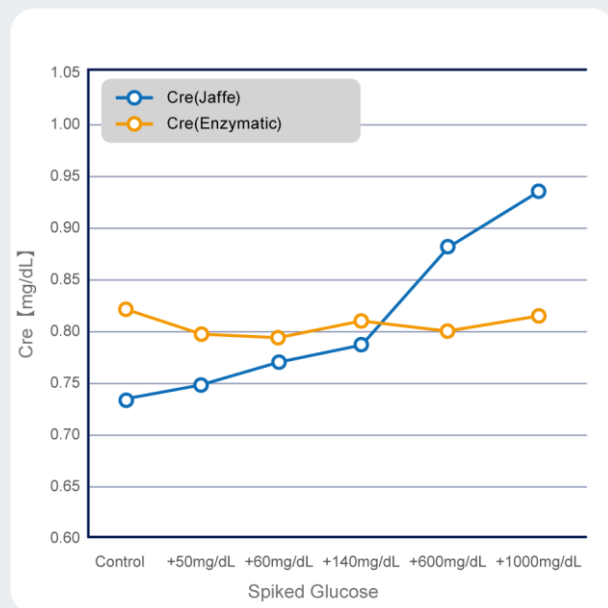
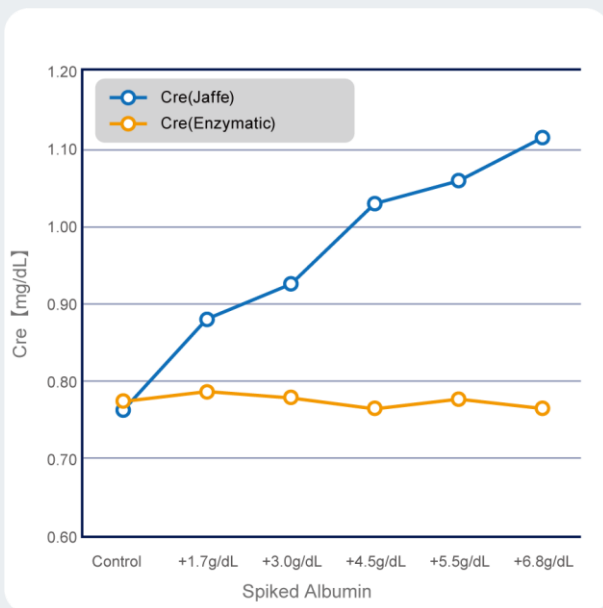


Effect of Interference

The results measured through the Jaffe and Enzymatic methods for each reagent confirm the extent to which creatinine is interfered with proteins and glucose.

The Jaffe method has a significantly larger bias for both additive as the concentration increases.

In contrast, the Enzymatic method shows stable results due to its high specificity.



Method

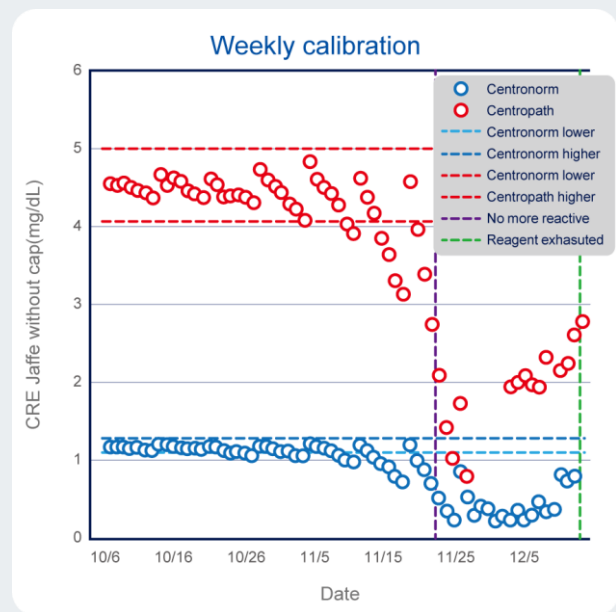
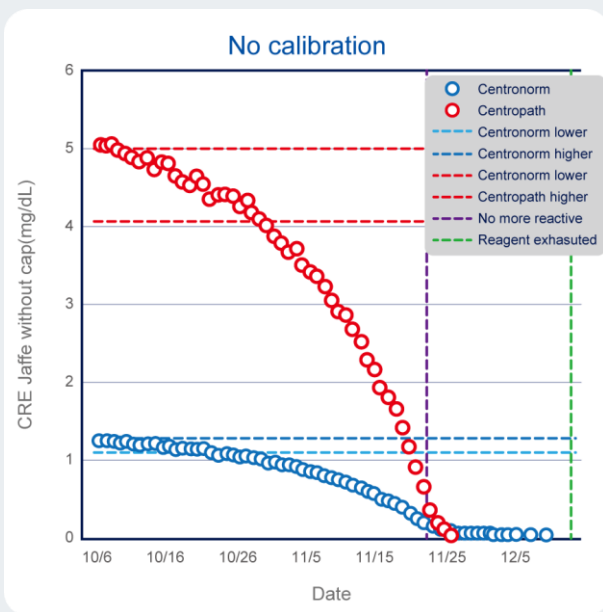
The in-house clinical chemistry analyzer CA-270 and the dedicated creatinine reagents are used along with albumin and glucose with high laboratory grade.



Onboard stability of the Jaffe and Enzymatic methods

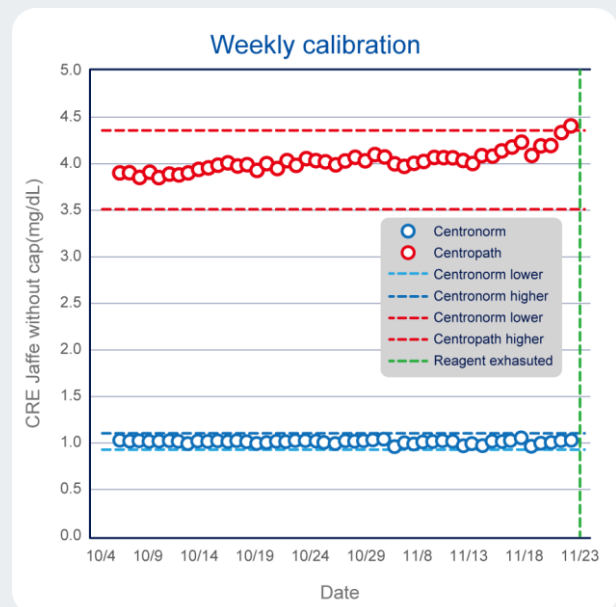
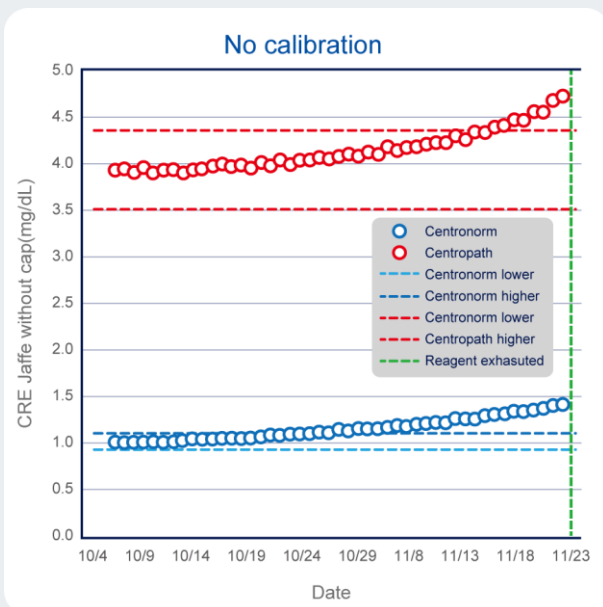
(1) Jaffe method

The Jaffe method is typically unstable as the Jaffe reagent contains alkaline ingredients and continuously absorbs bicarbonate from air to be neutral.





(2) Enzymatic method

In contrast, the Enzymatic method takes buffered solution and enables more stable measurement.



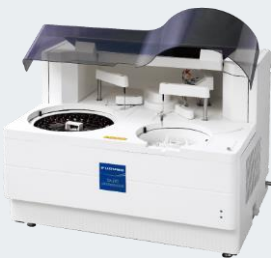


Reagent Package Information

	Product Name	Product No.	FURUNO Analyzer	Configuration	
				R1	R2
	Creatinine PAP (Enzymatic)	CF16917080-F3	CA-270	3 × 60mL	3 × 20mL
		CF16917028-F3	CA-400 CA-800	3 × 20mL	3 × 8mL
	Creatinine Jaffe Kinetic fluid 5+1	CF05917084-F	CA-270 CA-400 CA-800	6 × 67mL	6 × 17mL
		CF05917084-F3		3 × 67mL	3 × 17mL
		CF05917084-F4		4 × 20mL	4 × 7mL
		CF05917084-F8		8 × 20mL	8 × 7mL

Reagents are manufactured by Centronic GmbH certified according to ISO13485.

FURUNO Analyzers



Model: **CA-270**



Model: **CA-400**



Model: **CA-800**

*Please check our web site (<https://www.furuno.com/en/medical>) for more details.



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