



CORNLEY

Instructions for Refill Solution



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【Product Name】

Refill Solution

【Package】

There are two kinds of solution: R1: refill solution for ISE electrode, R2: refill solution for reference

Model	Composition	package
AFT-ISE	R1: ISE Refill solution 0.8ml	5×0.8ml
	R2:Reference Refill solution 20ml	1×20 ml

【Intended use】

Refill solution for K^+ , Na^+ , Cl^- , Ca^{2+} , pH electrode is intended to provide reference potential for internal electrode of K^+ , Na^+ , Cl^- , Ca^{2+} and pH electrode.

Refill solution for reference electrode is intended to provide reference potential for internal electrode of REF electrode.

【Principle】

There is an ion sensitive membrane between internal refill solution and sample. A potential V_1 is established against the membrane when the ion concentration differs on both side of the membrane. Another potential V_0 is provided by reference electrode which connects sample through a reference membrane. The difference of V_1 and V_0 is substituted into Nemst equation to calculate the ion concentration.

【Major ingredients】

1. R1: Refill solution for ISE electrode consists of KCl, NaCl, NaAc, $CaCl_2$, pH buffer and preservative agent
2. R2: Major ingredients of refill solution for REF are KCl.

The concentration of each ingredients shows below:

Item	R1:For ISE(mmol/L)	R2:For REF (mol/L)
K^+	5.00	4.00
Na^+	125.0	~
Cl^-	145.0	4.0
Ca^{2+}	10.0	~
pH	7.60	~

【Storage】

1. The reagent should be stored in a shady, dry environment, avoid direct sunshine, the temperature should be between $2^{\circ}C$ to $25^{\circ}C$. The reagent could not be refrigerated for storage.
2. According to the prescriptive conditions for storage, shelf life of unopened ampoule is 12 months from the manufactured date. The opened refill solution for ISE electrodes (K^+ , Na^+ , Cl^- , Ca^{2+} , pH) should use only once. The reference solution should use within 3 months once opened.

【Applicable instrument】

This reagent is applicable for Cornley@electrolyte analyzer employing ISE method.

【Sample requirements】

The reagent is independent to the measurement and irrespective to the sample.

【Limitations】

1. Refill solution for ISE: The evaporative water lose from the reagent after long time operation can increase the concentration and hence affect the performance of electrode. It is required that refill solution for ISE electrode be replaced timely
2. Refill solution for reference: KCl crystals may generate when temperature is low and excessive crystals can affect the reference electrode.

【Performance Characteristics】

Item	K ⁺	Na ⁺	Cl ⁻	Ca ²⁺	pH
Within-runCV(%)	≤1.5%	≤1.5%	≤1.5%	≤1.5%	≤1.0%
Between-runCV(%)	≤3.0%	≤3.0%	≤3.0%	≤5.0%	≤1.0%
Accuracy Bias (%)	≤2.0%	≤1.5%	≤2.0%	≤5.0%	≤1.0%

Note: Only K⁺ is tested in the refill solution for reference.








【Warning and Precautions】

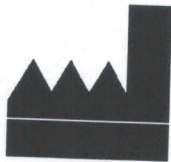
1. The reagent is intended for electrode maintenance only
2. The preservative agent contained in the reagent is slightly erosive. Avoid direct contact skin and eyes. Do not swallow.
3. Waste ampoule and residual reagent should be disposed in compliance with local regulation to avoid biological contamination.

【References】

"National clinical examination procedures" (third edition), editor in chief- Mr. Ye Y.W, Mr. Wang Y.S 2006

【Symbols】

	For in vitro diagnostic device use		Date of manufacture
	Consult instructions for use		Serial No
	Batch No		Used by
	Temperature limitation		



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