



# Primary Amino Nitrogen (PAN) (K-PANOPA) Procedure for ChemWell®-T Auto-Analyser

## Requirements:

- Primary Amino Nitrogen (PAN) Assay Kit (**K-PANOPA**) (provides ~ 1200 assays).
- K-PANOPA ChemWell®-T assay file.
- Use in association with the Primary Amino Nitrogen (PAN) Assay Kit (**K-PANOPA**) product data booklet.

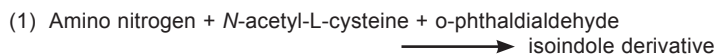
## Use:

For the specific measurement of primary amino nitrogen (PAN) especially in wines, fruit juices, beverages and food products.

For specific sample preparation methods refer to the Primary Amino Nitrogen (PAN) Assay Kit (**K-PANOPA**) data booklet.

## Assay Principle:

Conversion of PAN via the following reaction is directly proportional to the coupled formation of isoindole derivative:



## Procedure:

Prepare the assay reagents and calibrators and use with the K-PANOPA ChemWell®-T assay file.

## Primary Amino Nitrogen (PAN) Assay Kit Components:

**Bottle 1:** Tablets (100) containing *N*-acetyl-L-cysteine (NAC). Stable for > 2 years at 4°C or -20°C.

**Bottle 2:** Ortho-phthalaldehyde (OPA) in 12 mL of ethanol (96% v/v). Stable for > 2 years at 4°C.

## Preparation of Kit Components:

1. Use the contents of bottle 1 as supplied. Stable for > 2 years at 4°C or -20°C.
2. Use the contents of bottle 2 as supplied. This solution is stable for > 2 years when stored in the dark at 4°C.

## Preparation of Assay Reagents: (per ~ 120 assays)

### Reagent 1:

Component	Volume
distilled water	30 mL
bottle 1 (tablets)	10 tablets
Total volume	30 mL

Reagent 1 stability: ~ 1 day at 4°C

### Reagent 2:

Component	Volume
distilled water	2 mL
bottle 2 (OPA)	1 mL
Total volume	3 mL

Reagent 2 stability: > 14 days at 4°C

## Calibrators:

K-PANOPA 1: 0 g of nitrogen/L (use distilled water)  
K-PANOPA 2: 0.05 g of nitrogen/L  
K-PANOPA 3: 0.1 g of nitrogen/L  
K-PANOPA 4: 0.2 g of nitrogen/L

## Assay Parameters:

Assay volumes: Reagent 1: 0.250 mL  
Sample: 0.005 mL  
Reagent 2: 0.025 mL

Calibrators: 0, 0.05, 0.1, 0.2 g nitrogen/L  
Reaction time: 15 min at 37°C  
Wavelength: 340 nm  
Assay type: endpoint  
Reaction direction: increase  
Linearity: up to 0.2 g of nitrogen/L

