

## 460 N-P-Dissolution

*Universal Persulfate-Mineralization for N and P \ Package for 180 samples*

- Add 1 spoon **NP-1** into a dry tube
- Add a fully extended syringe (3.2ml) of sample
- Digest for 30' at 120° in a thermoreactor and cool
- Add 2 drops of **NP-2** and mix

The alkaline persulfate reagent NP-1 at first establishes a pH of ~10,5 necessary for the destruction of N-bearing components, becoming acidified during the reaction. This in turn makes it reactive to P-bearing compounds, finally reaching pH ~2. Sulfite (NP-2) destroys residual persulfate and any free chlorine that might form. Phosphorous can be determined by tube-tests as well as # 340 and 342. Tube-tests are mandatory for the nitrogen.

## 461 ΣN-Dissolution

*Total Mineralization of N-compounds \ Package for 180 samples*

- Add 1 spoon **SN-1** into a dry tube
- Add a fully extended syringe (3.2ml) of sample
- Add 2 drops of **SN-2** and mix
- Digest for 30' at 120° in a thermoreactor and cool

ΣN-2 raises the pH of persulfate (ΣN-1) to ~12, where all N-compounds are broken down and oxidized to nitrate. This secures an end-point of pH ~8, preventing the potential liberation of free chlorine. In contrast to the method of Kjeldahl (for NH<sub>4</sub> + organic Nitrogen), the Σ-N alkaline persulfate dissolution includes nitrite and nitrate. Tube-tests are mandatory for the subsequent determination.

## 462 ΣP-Dissolution

*Total Mineralization of P-compounds \ Package for 180 samples*

- Add 1 spoon **SP-1** into a dry tube
- Add a fully extended syringe (3.2ml) of sample
- Add 2 drops of **SP-3** and mix
- Digest for 30' at 120° in a Thermoreactor and cool
- Add 2 drops of **SP-3** and mix

Condensed and organic phosphates as well as their metal complexes are broken down to colorimetrically reactive orthophosphate in an acid oxidative medium. This reaches ~pH 1.2, ultimately raised somewhat by ΣP-3. All P-tests can be used subsequently.

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