# APC138
# Total Nitrogen
## MR 1 – 16 mg/L $TN_b$

**DOC312.53.94334**

**Principle**
Inorganically and organically bonded nitrogen is oxidized to nitrate by digestion with peroxodisulphate. The nitrate ions react with 2.6-dimethylphenol in a solution of sulphuric and phosphoric acid to form a nitrophenol.

**Range of Application**
Water, waste water

**Interferences**

T1

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|---|
| **400 mg/l:** CZV / COD |
| **800 mg/l:** $Cl^-$ |

The ions listed in T1 have been individually checked up to the given concentrations and do not cause interference. We have not determined cumulative effects and the influence of other ions.

Low-bias results are to be expected if the samples contain larger amounts of reducing agents. The measurement results must be subjected to plausibility checks (dilute and/or spike the sample).

| | |
|---|---|
| **Sample Volume** | **1,3 mL** |
| **Reagent A Volume** | **1,3 mL** |
| **Reagent D Volume** | **0,2 mL** |
| **Reagent A Filling Volume** | **45 mL** |
| **Reagent D Filling Volume** | **35 mL** |
| **Temperature Sample/sample cuvette** | **15 – 25°C** |
| **pH sample** | **3 - 12** |
| **Digestion Temperature/Time** | **120°C/30 min. or 110°C/60 min.** |

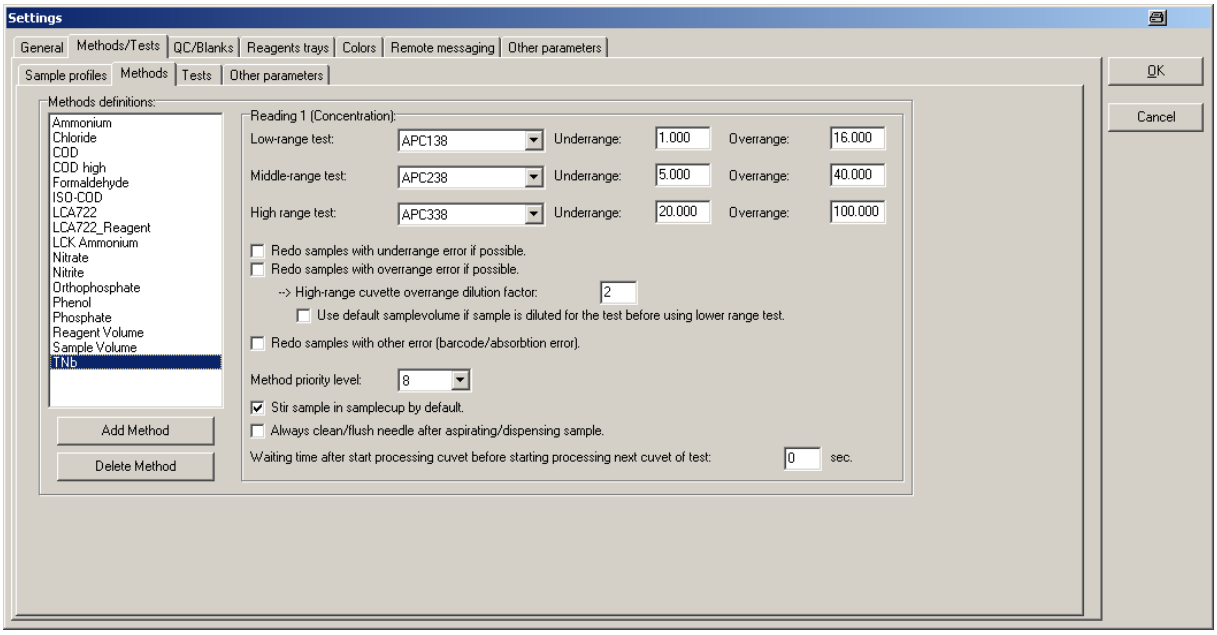
AP3900 multi with HT-Module can also use:

| | |
|---|---|
| **Digestion Temperature/Time** | **170°C/15 min.** |

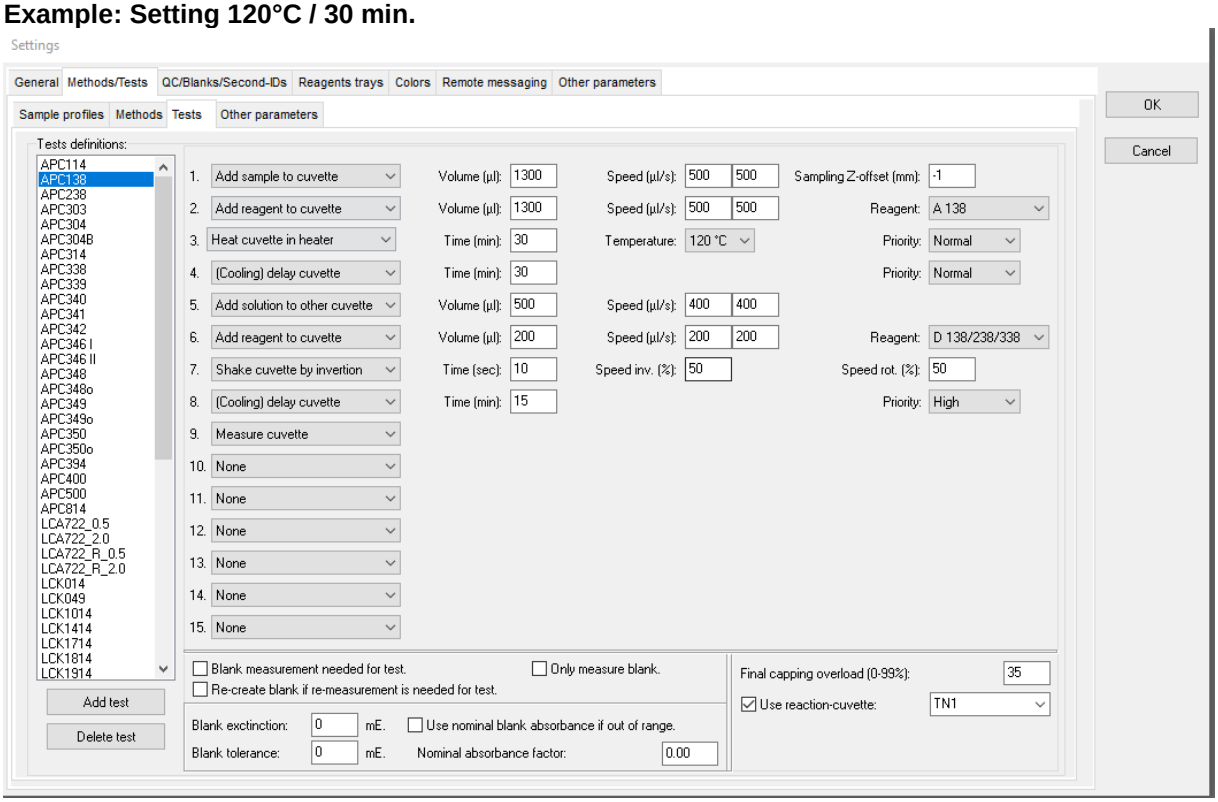
### Please note:
With AP3900 Software Version 1.0.7.5 or higher a digestion temperature of 120°C is possible to be chosen.
So the tests for TN (APC138 / APC238 / APC338) can be run at 120°C/30 min. to save time and to have identical time and temperature as manual handling with LCK138 / LCK238 / LCK338.

There is no change in the quality of the results by switching from 110°C/60 min. to 120°C/30min. procedure. There is no calibration update needed.

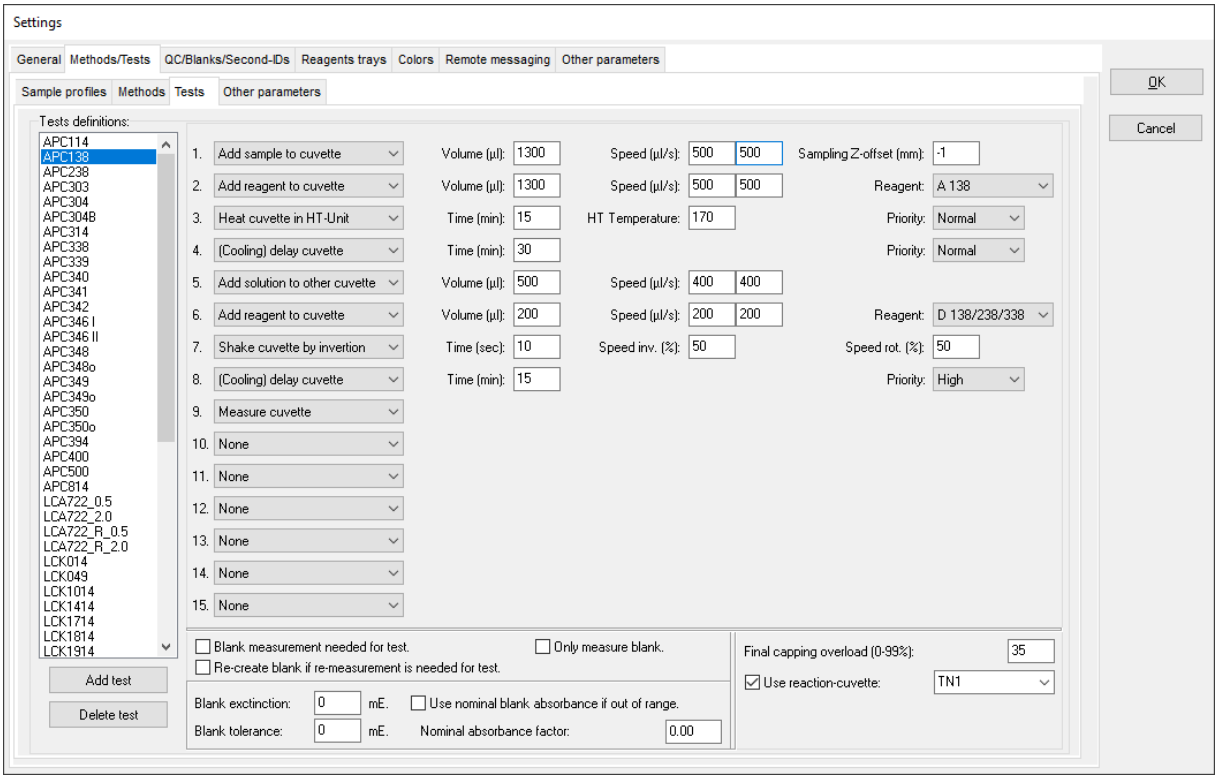
**Method Library:**
APC138 is pre-programmed in the method library. Please check under Settings/Software/Application/Methods **TNb** and Tests **APC138**.




## Example: Setting 120°C / 30 min.



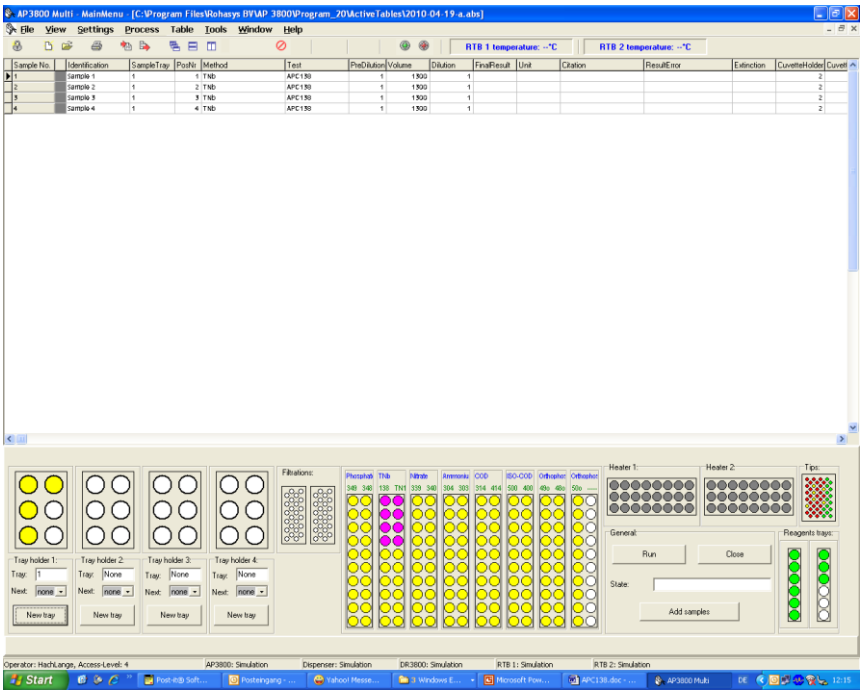
**Alternative with AP3900 Multi with HT-Module:**



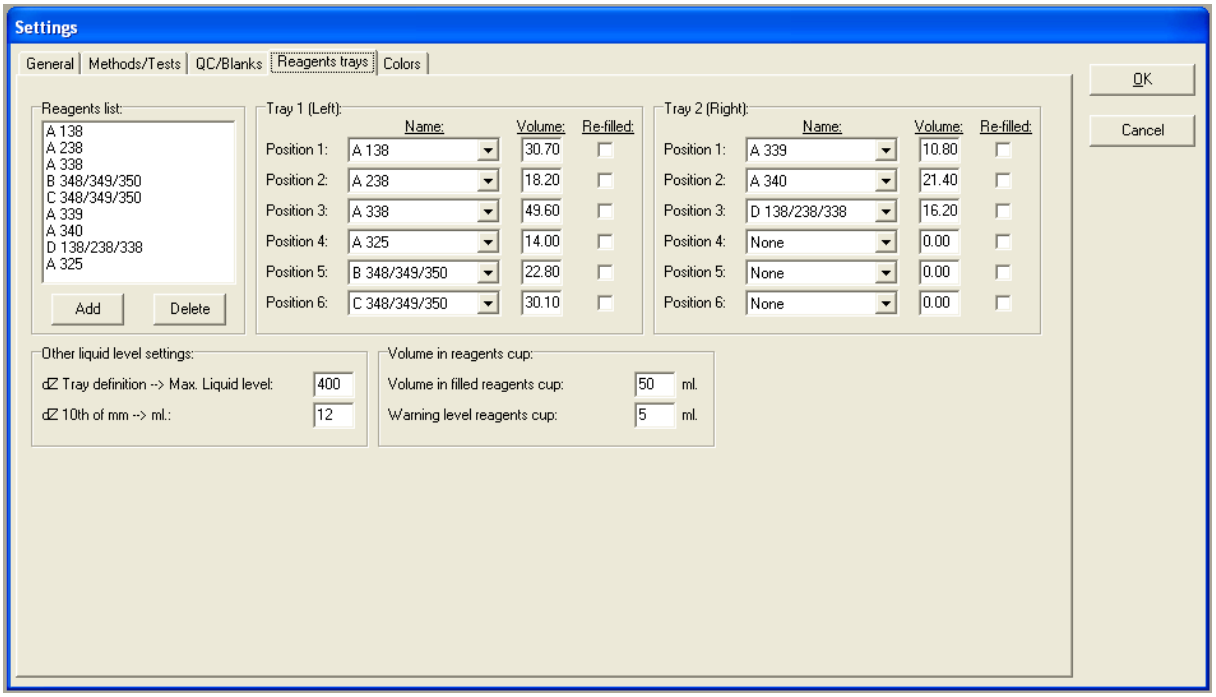

**Run the APC138 total Nitrogen method**

Create a Run like described in the QUICK GUIDE

- Place the APC138 digestion (TN1; APC938-25) and reaction cuvettes (APC138-25) according to the settings in the Software in the cuvette racks.



- Place the samples according to the settings in the Software in the sample racks
- Place the Reagent A and D according to the settings in the Reagent trays




- Check if fresh and enough pipette tips are available
- Check if enough Rinsing/Dilution water is available
- Initialize the AP 3900 multi and the Dispenser

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