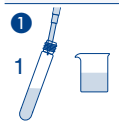
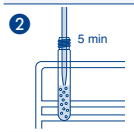
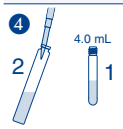
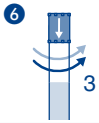
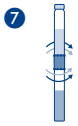
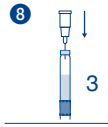
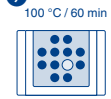
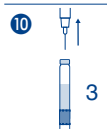
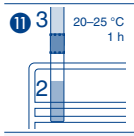
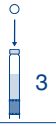
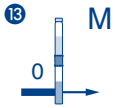
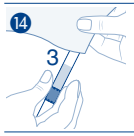
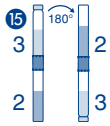
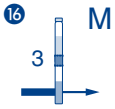
Step-by-step instruction and user advices

MACHEREY-NAGEL

NANOCOLOR® TOC 30 (REF 985075) and TOC 300 (REF 985078)

The determination of TOC is a high-precision measurement. Accurate working (e.g. pipetting) as well as proper storage of test kits and standards are required for save and reproducible results.

Working steps	Important notes
Pipetting	
❶  ▪ Pipette 5.0 mL (TOC 30) / 0.5 mL (TOC 300) of homogenized sample into cuvette “1”	▪ Deviations are possible without homogenization
Removal of TIC	
❷  ▪ Insert opened cuvettes into TIC-Ex, start and remove the TIC for 5 min ▪ Blow out fluid residues from tips into cuvettes after removal process	▪ Deviations are possible without blowing out residues
❸  ▪ Close cuvette and mix	▪ Deviations are possible without mixing
Connecting – Perform steps 4–8 quickly, no parallel processing of different samples	
❹  ▪ Mark cuvette “2” with included label ▪ Transfer 4 mL pre-treated solution from cuvette “1” into cuvette “2”	▪ Labeling avoids mixing up
❺  ▪ Close cuvette, shake vigorously for 10 s. Decomposition reagent must be dissolved completely	▪ Complete dissolution of decomposition reagent gives optimal digestion results
❻  ▪ Open indicator cuvette “3”, immediately close it straight and hand-tight with threaded coupling	▪ Pay attention to orientation of the threaded coupling ▪ Cuvette must not remain open for too long as indicator reacts sensitively to CO_2 from air
❼  ▪ Open cuvette “2”, immediately close it with the prepared indicator cuvette/threaded coupling-combination straight and hand-tight ▪ When contact of glass and sealing is established, a further quarter turn is enough. This way, the combination is sealed and stays straight	▪ Wetting of the membrane with digestion solution leads to deviations
❽  ▪ Pierce venting needle completely through the rubber septum of cuvette “3”	▪ Needles that are not pierced completely through the rubber septum can clog and change measuring results

Working steps	Important notes
Digestion and cooling	
❾  ▪ Heat cuvette combination for 1 h at 100 °C in a heating block	▪ Cuvette “2” has to be inserted in the heating block
❿  ▪ Remove cuvette combination from the heating block after digestion process and immediately pull out venting needle	
⓫  ▪ Let cuvette combination cool down to room temperature for 1 h	▪ Adherence of the cooling time is important to ensure that an equilibrium of the indicator is established
Measuring	
⓬  ▪ Put the round, gray label on the rubber septum	▪ Label seals the rubber septum reliably during the measurement and storage in box for disposal
⓭  ▪ Clean NULL solution with cleaning cloth from the outside, afterwards insert into photometer	▪ Use respective cuvette slot cover for photometer
⓮  ▪ Clean indicator cuvette “3” with cleaning cloth from the outside	
⓯  ▪ Invert cuvette combination	▪ Invert the cuvettes immediately before measurement ▪ Repeated turning can lead to deviations
⓰  ▪ Insert cuvette combination with cuvette “3” turned down into photometer	▪ Use respective cuvette slot cover for photometer

KATEN100207 Schema Schritt-für-Schritt-Anleitung *NANOCOLOR* TOC-Teste
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