Anton Paar

Quick
Guide

XSAMPLE 530

CONTENTS

GRAPHICAL DESCRIPTION

OPTIONAL UNITS

External air

Magnetic particle trap (MPT)

Sample recovery unit (SRU)

Pressurized measurement unit (PMU)

CLEANING VOLUME

low

medium

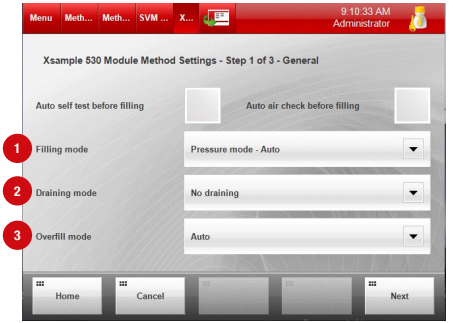
high

SPEED FACTOR

slow

fast

1/3 FILLING & DRAINING



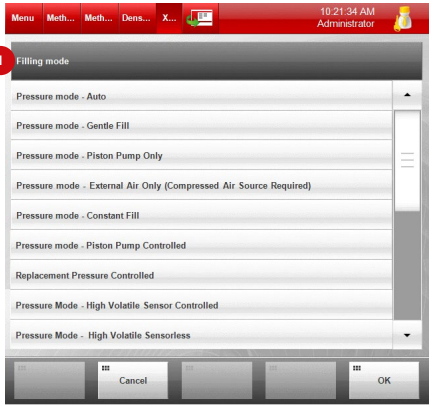
AUTO SELF-TEST BEFORE FILLING

- Can be selected to rule out any changes in the system
- Checks for leaks and blockages, and checks the pressure of the system to ensure safe operation
- Adds 30 seconds to filling procedure

AUTO AIR CHECK BEFORE FILLING

- Can be selected to verifiably rule out any sample cross-contamination if needed
- Checks that the measuring cell is clean before a sample is filled
- Adds 30 seconds to filling procedure

1/3 FILLING & DRAINING



PRESSURE MODE – AUTO

- Ideal for a wide range of samples that can be filled without special treatment
- Pressure increases step by step until the sample is filled

PRESSURE MODE – GENTLE FILL

- Ideal for samples which tend to rupture (e.g. oil, pure ethanol, whisky)
- Slow filling throughout the whole filling process

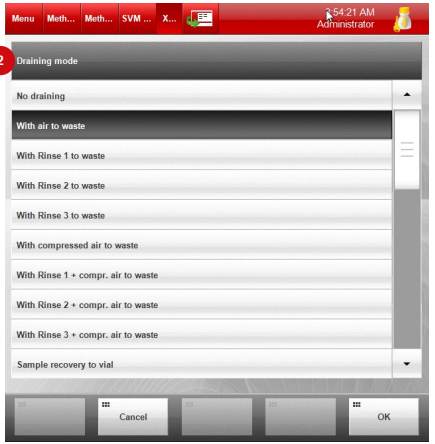
1/3 FILLING & DRAINING

PRESSURE MODE – PISTON PUMP ONLY	- Ideal for low-viscosity, aqueous samples (e.g. flavors, lube oil, etc.) - Fills twice as fast as “Gentle Fill” using the piston pump	
PRESSURE MODE – EXTERNAL AIR ONLY (COMPRESSED AIR SOURCE REQUIRED)	- Ideal for highly viscous samples for a fast filling performance (e.g. glycerin) - Filled only with external compressed air	
SUCTION MODE	- Ideal to suck out samples with a viscosity below 1000 mPa.s from open vials (customer vials) - Filled by applying vacuum with piston pump	
PRESSURE MODE – CONSTANT FILL	- Ideal for samples with low surface tension (e.g. liqueurs, juice) - Filled with constant speed to avoid bubbles	
PRESSURE MODE – PISTON PUMP CONTROLLED	- Ideal for in-service oil, motor oil, and other samples. If the viscosity is known this can be used to optimize filling speed to its maximum - The filling pressure of the piston pump must be set	

1/3 FILLING & DRAINING

REPLACEMENT PRESSURE CONTROLLED	- Ideal for samples that do not require intermediate cleaning - Sample will be completely displaced by the next sample	
PRESSURE MODE – HIGH VOLATILE SENSOR CONTROLLED	- Ideal for highly volatile samples to avoid formation of bubbles - Filled using the defined PMU parameter	
PRESSURE MODE – HIGH VOLATILE SENSORLESS	- Ideal for highly volatile samples that tend to rupture - Filled using the defined PMU parameter within a set time limit	

1/3 FILLING & DRAINING



NO DRAINING

- Sample will not be drained before the cleaning procedure starts; this can save time if the sample is easy to clean

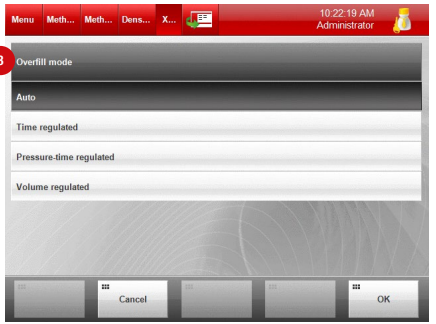
WITH AIR TO WASTE

- Quick drain of low-viscosity samples which do not tend to solidify if air is used
- Air from piston pump used for draining

1/3 FILLING & DRAINING

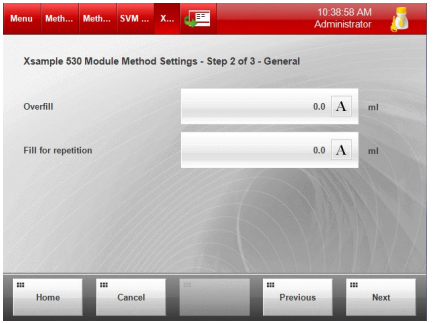
WITH RINSE [1-3] TO WASTE	- For highly viscous samples to use the draining step as cleaning preparation - Uses rinsing liquids for draining samples with piston pump	
WITH COMPRESSED AIR TO WASTE	- Quick drain of medium-viscosity samples which do not tend to solidify if air is used - Uses external compressed air for draining samples	
WITH RINSE [1-3] + COMPR. AIR TO WASTE	- For highly viscous or sticky samples to use the draining step as cleaning preparation - Uses rinsing liquids and external compressed air for draining samples	
SAMPLE RECOVERY TO VIAL	- For the recovery of expensive samples to return the sample into the vial from which it has been extracted	

1/3 FILLING & DRAINING



OVERFILL MODE	- Setting only necessary if overfilling or filling with repetitions is used and unacceptable deviations from the volume occur
AUTO	- For samples with viscosity higher than 5 mPa·s
TIME REGULATED	- For low-viscosity samples
PRESSURE-TIME REGULATED	- For highly viscous samples and samples which need high pressure for movement
VOLUME REGULATED	- For ultra-low-viscosity samples which tend to spread, and samples which need low force for sample movement

2/3 DETAILS OF FILLING & DRAINING

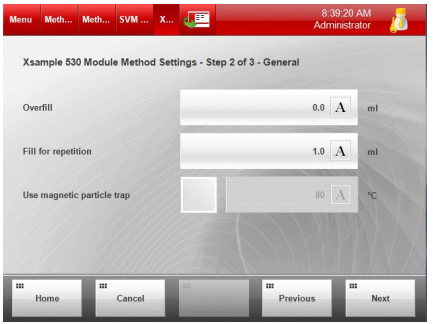


OVERFILL

- For samples that need additional sample volume filled through the measuring cell to obtain good results

FILL FOR REPETITION

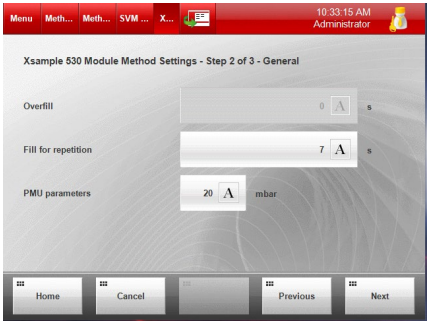
- Sample amount to be re-squeezed with each repetition



USE MAGNETIC PARTICLE TRAP

- Activate this to use the magnetic particle trap (MPT) in the selected method
- Temperature settings for the MPT available after activation

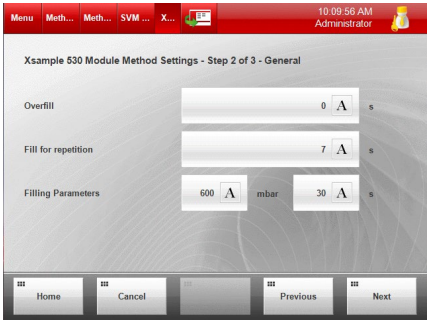
2/3 DETAILS OF FILLING & DRAINING



PMU PARAMETERS

- Set the pressure to ensure constant speed during filling
- Use higher pressure for highly viscous samples

Only with Filling Mode: High volatile sensor controlled

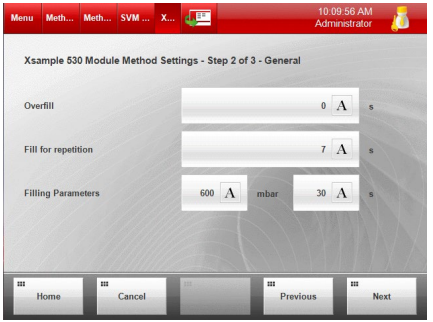


PMU PARAMETERS

- Set the pressure to ensure constant speed during filling
- Set the time for the filling process to fill as much sample as needed for perfect measurement results

Only with Filling Mode: “Pressure Mode – High Volatile Sensorless”

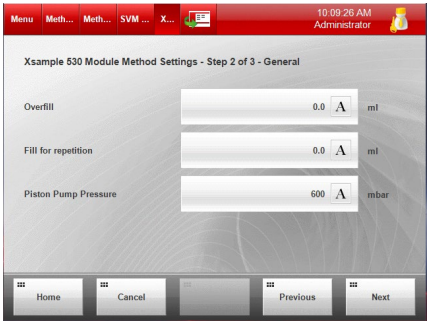
2/3 DETAILS OF FILLING & DRAINING



FILLING PARAMETERS

- Set the parameter to displace the sample with the next sample

Only with Filling Mode: “Replacement pressure controlled”

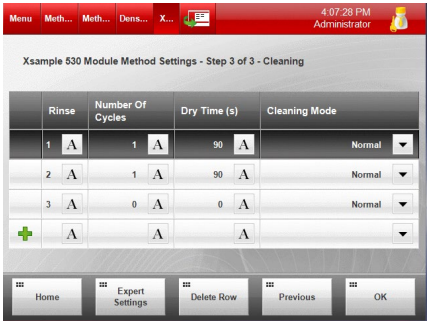


PISTON PUMP PRESSURE

- Set the filling pressure
- Use higher pressure for highly viscous samples

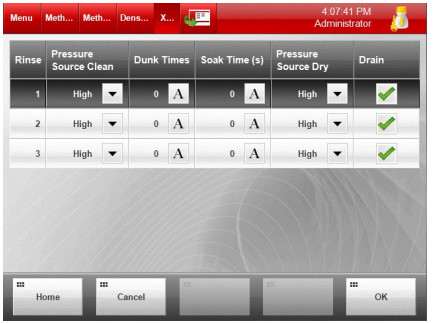
Only with Filling Mode: “Pressure mode - Piston Pump Controlled”

3/3 CLEANING



RINSE	- List of the rinsing liquids (1–3)
NUMBER OF CYCLES	- Cleaning procedure cycles - Enter "0" to skip this step
DRY TIMES	- Sets the time for drying the measuring system (intermediate or final drying step) - Whenever possible, external air should be used to speed up the process

3/3 CLEANING



PRESSURE SOURCE CLEAN

- For flushing the rinsing liquid through the measuring system during cleaning
- High for 2 bar external compressed air to push out highly viscous samples

- Low for the internal air pump of the master instrument to push out low-viscosity samples

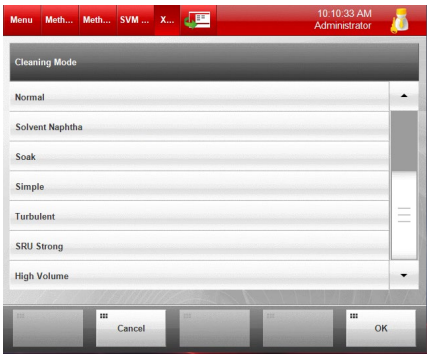
DUNK TIMES

- The solvent is pushed forward and backward to increase the cleaning effect
- The needle moves a specified number of times up and down in the cleaning tubular
- Enter "0" to deactivate this step

3/3 CLEANING

SOAK TIMES	- For sticky samples, to increase contact time with cleaning solvent before draining it from the system - Only with SVM: For a better cleaning effect the soak time can be set for longer than 10 seconds (the rotor will start turning during soak time if set >10 seconds)	
PRESSURE SOURCE DRY	- To decrease the time for drying, select the system pressure source high whenever compressed air is available - High for 2 bar external compressed air	
	- Low for the internal air pump of the master instrument	
DRAIN	- Activate the check box to drain the rinsing liquid from the measuring system at the end of the cleaning step	
	- Deactivate the check box to leave the rinsing liquid in the measuring system (until it is drained in a later step)	

3/3 CLEANING



NORMAL

- For almost all samples; very efficient in combination with dunk times as air gaps are formed and act like a brush

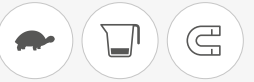
SOLVENT NAPHTHA

- Similar to cleaning mode "Normal" but with special treatment of solvent naphtha

SOAK

- For tenacious sample residues, especially when multiple measuring cells are connected (e.g. Modulyzer)

3/3 CLEANING

SIMPLE	- For simple cleaning of the instrument by flushing through solvent	
TURBULENT	- For samples which require scrubbing by fast movement of the rinsing liquid	
MAGNETIC PARTICLE TRAP AND CELLS	- To clean MPT together with the cell	
MAGNETIC PARTICLE TRAP ONLY	- To clean MPT without the cell	
SRU STRONG	- To clean SRU and the cell	
HIGH VOLUME	- Simple cleaning for large systems - Fast purging of the cells with solvent	

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