big sized filters for LabMaster-aw, LabTouch-aw, LabSwift-aw, LabStart-aw

small sized filters for LabMaster-aw neo

1. Introduction

These specially designed filters shall be mounted in front of the sensor and used to provide protection against chemical contamination and degradation of the resistive electrolytic sensor element.
As the inner part of the sensor consists of a liquid, volatiles which dissolve and dissociate are extremely dangerous and harm the sensor in a very short time.

Be aware that sensor failure due to chemical contamination by NOT using an appropriate chemical filter is not covered by warranty and replacement goes 100% on the user's account.
For that reason, it is inevitable to check sample composition for volatiles PRIOR to order the instrument. Your local Novasina representative will ask you those questions and will hand you this document for signing.
We fully understand if sample compositions and/or recipes cannot be shared with us but somehow we must gather the information, respectively ensure, that we can offer the best possible solution for a reliable, accurate and repeatable water activity measurement of your samples.

Changing of filters
Many questions about changing interval were and are brought to our attention. Unfortunately, there is no precise guideline but a **rule of thumb**:

- If you do less or equal than 10 measurements a week, change filter every 6-12 months
- If you do more than 10 measurements a week, change filter every 3-6 months
- If instrument is in use, day and night, change filter every 2 months

Please read the **operating instruction manual** of the water activity meter as well to learn about the procedure how to find out the optimal chemical filter changing interval. It **is important that the filter is changed** from time to time as it is of saturation type. Once saturated, volatiles will pass through and **harm the sensor.**

General information regarding sensor
The sensor has a grey/brownish coating. Any **cleaning/repeal may damage the sensor**

Alcohol samples / alcohol sensor
Be aware that sometimes filter combinations must be used to get highest protection efficiency. **As soon as ethanol is involved, our alcohol-resilient sensor** (CM-3 for LabTouch-aw or awSens-ELS for LabMaster-aw neo) must be used. If ethanol is present in conjunction with other volatiles, select the alcohol-resilient sensor plus the respective filter(s) from the selection list (page 2 and 3). Samples should not have water activity level <0.3aw. Note: there is no alcohol-resilient sensor available for LabSwift-aw or LabStart-aw.

General note: **chemical filters will extend the measurement time** as the water vapor has to pass through the filter but.

If you have doubts about the procedure or feel unsure how to work that out, please do not hesitate to contact your local Novasina representative or check www.Novasina.ch/lab/support.

Filter Selection Data Sheet

Support for Water Activity aw-Instruments

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2. What to Take When?

Known volatiles	CM2 sensor or awSens-ENS with filters				Accessories	Alcohol sensor
	eVC-21 (1111001) (LabMaster-aw, LabTouch-aw, LabSwift-aw, LabStart-aw) / **eVC-18** (2601662) (LabMaster-aw neo)	**eVC-26** (1111003) (not for LabMaster-aw neo)	**eVC-21 and eVALC** (1111001) and (111 0995) **or** **eVC-18/eVALC** (2601724 filter combination for LabMaster-aw neo)	**Redox** (1117212 for LabMaster-aw, LabTouch-aw, LabSwift-aw. LabStart-aw) (2601330 for LabMaster-aw neo) **(due to limited space in chamber, use only alone)**	**Regeneration-Kit** (2601962) (for use see instruction for using the Regeneration Kit nr. 006785.00 / regeneration only for CM-2 and awSens-ENS sensor)	**CM-3** (for LabTouch-aw) / **awSens-ELS** (for LabMaster neo) (no regeneration with Regeneration kit possible)
Acetic acid (eg. vinegar, mustard etc)	X					
Alcohols, secondary (e.g. 2-Propanol,2-Butanol)				X		
Amines (f.e. urea, ammonia)		X				
Aroma, light (fruit, yeast, hop, herbs, vanilla, orange)				X	X	
Aroma, strong (like spices, herbs),			X		X	
Butyric acid	X					
Cannabis			X			
Essential oil (only pure menthol, etc)			X		X	
Ethanol (ethyl alcohol)						X
Formic acid	X					
Furanes (bread aroma)				X		
Glycerin (f.e. in PET Food, protein bar)			(X in case of additional volatiles)	X		
Hydrocarbons, aromatic		X				
Hydrogen halides	X					
Hydrogen peroxide	X					
Hydrogen sulfide	X					
Ketones (eg. acetone or MEK)				X		
Nicotine, Snus		X			X	
Perfumes, fragrances			X		X	
Phenol				X		
Propylen-glycol, polyethylen-glycol				X		
Sulfur dioxide	X					
Sulphuric acid	X					

I confirm that I have verified all samples to be measured on the water activity meter and marked the critical components / volatiles in the table above. If anything is marked, I confirm that any of the listed volatiles are present in the samples

Company stamp/Name/Position:_____   Place/Date: _____

3. Which filter and sensor for which instrument?

Instrument	eVC-21** P/N 1111001	eVC-26 P/N 1111003	eVALC** P/N 1110995	Redox* P/N 1117212 (due to limited space in chamber, use only alone	eVC-18 P/N 2601662	eVC-18/eVALC combo P/N 2601724	Redox for LabMaster-aw neo P/N 2601330	***Regeneration Kit (only for CM-2 sensor and awSens ENS) P/N 2601962	CM-3 P/N 2600536	awSens ELS P/N 2601615
LabMaster-aw neo					X	X	X	X		X
LabMaster-aw basic, standard, advanced	X	X	X	X				X	X	
LabTouch-aw	X	X	X	X				X	X	
LabSwift-aw	X	X	X	X				X***		
LabStart-aw	X	X	X	X				X***		

*Note: if a Redox filter is installed, no secondary filter can be mounted due to missing space in the measurement chamber.

**Note: for filter combination eVALC/eVC-21 the placement is not important but for practical reasons the eVC-21 filter can be placed in the direction of the sensor, the eVALC in direction measurement chamber.

***Note: it is possible to use the regeneration kit with the LabSwift-aw and LabStart-aw. However, due to no temperature control, the efficiency of the regeneration at room temperature is quite low. If possible, put the whole instrument with the Regeneration Kit inside the measurement chamber in an preheated oven at 30-40°C and proceed with the regeneration (see instruction for using the Regeneration Kit doc. nr. 006785.xx)