

# SINGLE MAGNET MIXER

The attachable Single Magnet Mixer (SMM) gives you access to a wide range of interesting applications with your CTC Combi PAL autosampler. The Mixer is nothing other than an automated stirring plate, which rotates the magnet located in each vial at speeds of up to 750RPM. At the same time, it can be used to heat or cool your sample.

The liquid is mixed by a small magnet inside the vial and creates a vortex at high speeds. Fiber lifetime is significantly increased due to the gentle mixing within the SMM.

This is especially true for PDMS fibers, which are known for having a longer lifetime than other fiber materials. The SMM immerses the fiber in the liquid, and the magnet inside the vial provides a fast equilibrium between the fiber and the sample. The sampling takes place while the system is closed. Data show that the SMM has favorable reproducibility and up to 15% higher response rates than an agitator. This ratio increases with higher boiling compounds.



Fig. 1. Combi PAL with Single Magnet Mixer and optional purging station

## System Features

- ▶ Intensive mixing capability by using magnetic stir bar for quick equilibrium
- ▶ Easy comparison/transfer between manual and automated methods
- ▶ No temperature gradients inside the vial – even while sampling
- ▶ Heats up to 150°C
- ▶ Optional Peltier Cooling available
- ▶ Fully automated sampling through closed housing
- ▶ PAL controls all heating and mixing cycles
- ▶ Controllable with Firmware or Cruise Control Software
- ▶ Integrates with Agilent ChemStation
- ▶ Adapters available for 2 mL or 10 mL vials

## Applications

- ▶ Incubator for headspace analysis
- ▶ Incubator for SPDE™
- ▶ Incubator for SPME
- ▶ Sample preparation for mixing, cooling and heating of various liquids
- ▶ Sample derivatization

## SPME or SPDE in Liquid

The most beneficial application of the Single Magnet Mixer is SPME or SPDE immersed in liquid. When immersed in liquid, the SMM is gentle with the fiber and needle.

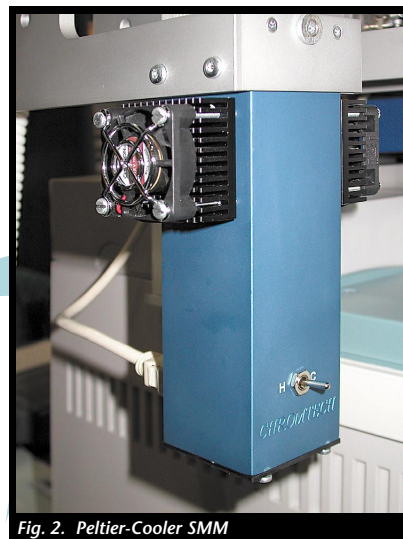


Fig. 2. Peltier-Cooler SMM

# SINGLE MAGNET MIXER

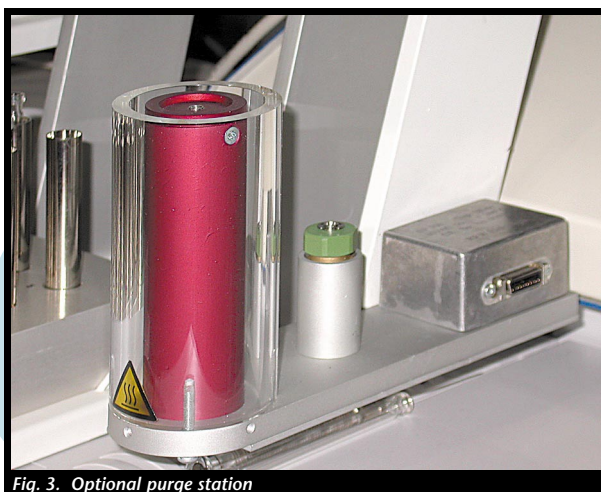


Fig. 3. Optional purge station

Description	Part Number
<p><b>PAL SINGLE MAGNET MIXER</b></p> <p><b>Incubator for single HS, SPME or SPDE applications consisting of:</b></p> <ul style="list-style-type: none"> <li>• 1 pc Single Magnet Mixer for 20 mL headspace vials (Adapters available for 2 and 10 mL vials)</li> <li>• Speed selection from 250 to 750 RPM</li> <li>• Controlled by PAL Autosampler</li> <li>• Temperature range up to 150° C</li> <li>• Requires small mixing bars</li> <li>• Requires Cycle Composer 1.5 or higher</li> </ul> <p>Optional: For use with 2mL vials order Code Nr.: W-PAL Mix2mL-Adap Optional: For use with 10mL vials order Code Nr.: W-PAL Mix10mL-Adap</p>	PAL Mix20
<p><b>PAL Single Magnet Mixer with Peltier Cooling</b></p> <p><b>Incubator for single HS, SPME or SPDE applications. Heats and cools samples. Consisting of:</b></p> <ul style="list-style-type: none"> <li>• 1 pc Single Magnet Mixer for 20 mL headspace vials (Adapters available for 2 and 10 mL vials)</li> <li>• Speed selection from 250 to 750 RPM</li> <li>• Controlled by PAL Sampler</li> <li>• Temperature range from as low as 4° C up to 140° C</li> <li>• Requires small mixing bars</li> <li>• Requires Cycle Composer 1.5 or higher</li> </ul> <p>Optional: For use with 2mL vials order Code Nr.: W-PAL Mix2mL-Adap Optional: For use with 10mL vials order Code Nr.: W-PAL Mix10mL-Adap</p>	PAL MixPelt
<p><b>PAL Cycle Composer</b></p>	PAL CycCompCD
<p><b>PAL-Server Software</b></p>	PAL Server
<p><b>Adapter insert for 2 mL vials</b></p>	W-PAL Mix2ml-Adapt
<p><b>Adapter insert for 10 mL vials</b></p>	W-PAL Mix10ml-Adapt

Distributed by: