

## Recommendations for Handling Steinle Cassettes

### Maintenance & Care

- If possible, use the rest position when not dispensing.
- Clean cassettes directly after use with ddH<sub>2</sub>O or a detergent.
- Ideally, dedicate one cassette for each liquid and each cell line.
- Let the tubings of the cassettes dry completely before storing.
- Recalibrate the cassettes regularly, depending on frequency of use.

*Do not flush with alcohol when dispensing any proteinaceous liquids. This leads to precipitation and shortens the lifetime of the cassettes.*

### Storing

When cassettes are not used for a longer period:

- Sterilize with ethanol and flush with plenty ddH<sub>2</sub>O afterwards.
- Check if no fluid is left in the tubings.
- Store in original package or a clean, dust-free plastic bag.
- Use cassettes within 1 year after buying. Accuracy of calibration may vanish over time.

### Streaks, Drops & Bubbles

- Avoid bubble forming in the tubings, as this may lead to streaks and drops on plates (Prime with low speed, use a surfactant e.g. Tween 20 or PBS for cells).
- Recalibrate a cassette when changing reagents and viscosity differs from water.
- Change the dispensing speed, low speed can sometimes lead to droplet forming on the tips.
- Consider a different cassette version for a particular liquid e.g. metal, plastic, angled, large bore, adapter.
- Check for a coherent and straight priming jet. A non-straight jet can indicate a partially blocked tip or increased bubble forming.

### How to avoid cloggs

Positive effects	Negative effects
<ul style="list-style-type: none"> <li>• Filter liquids upfront 1-2 times. Use a filter net of 50µm</li> </ul>	<ul style="list-style-type: none"> <li>• Leave cassettes under tension when not in use</li> </ul>
<ul style="list-style-type: none"> <li>• Use Steinle's SmallTube Filter (Cat. No.: ST-0488)</li> </ul>	<ul style="list-style-type: none"> <li>• Priming without liquids</li> </ul>
<ul style="list-style-type: none"> <li>• Before dispensing, clean the end of the tubings by putting them into a vessel with water. Afterwards shake the tubing dry.</li> </ul>	<ul style="list-style-type: none"> <li>• Sterilize cassettes with alcohol when dispensing proteins or cells</li> </ul>
<ul style="list-style-type: none"> <li>• Try Steinle's Large Bore Version (Cat. No.: ST-0080)</li> </ul>	<ul style="list-style-type: none"> <li>• Let liquid stand in the tubing for a longer period</li> </ul>

### How to resolve cloggs

- Try alternating with the EMPTY and PRIME function.
- Take a flat vessel with ddH<sub>2</sub>O or a detergent, immerse the cassette tips and backflush the cassette.
- Prime the cassette with a detergent and let it stand in the tubings for 10 minutes.
- Take the needle from the Steinle Cleaning Set and try carefully to dissolve the clog.
- Use the syringe from the Steinle Cleaning Set, attach it to a clogged tip and flush it with a detergent or ethanol.

*You are welcome to send your cassettes to Steinle Labtechnology for a cost-effective refurbishment.*