

Cell Dispensing with Steinle Cassettes

Steinle offers various versions, which are ideal to dispense cells and help optimizing your assay.

However, all provided cassette versions are a suitable choice for cell dispensing in general.

In addition to the correct choice of cassette, there are other points, which can significantly affect the dispensing result.

Avoid cloggs

- Select a suitable dispensing speed. Sometimes low speed leads to increased clogging for certain cell lines.
- Do not flush tubings with alcohol, better sterilize through autoclaving (20 minutes, 121 °C).
- Prime tubings with PBS prior to dispense cells, to wet the tubings and tips. Afterwards prime about 10ml of Cell suspension, to get an even distribution of cells.
- Consider dispensing from an orbital shaker. This keep the cells from getting clumpy. Alternatively, a magnetic stirrer can be used.
- Don't let the cell solution stand in the tubing.
- Use the Large Bore version from Steinle, which is less prone to clogging.

Resolve cloggs

- Try alternating with the EMPTY and PRIME function.
- Take a flat vessel with ddH₂O 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.*

Avoid Frothing

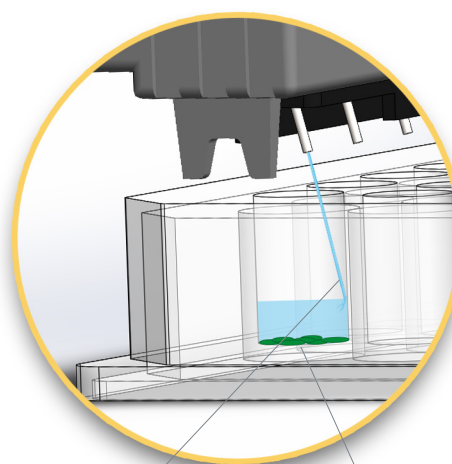
- If you want to replace liquids, prime the new solution without emptying the older one.
- Reduce the dispensing speed or mixing speed if used.
- Consider taking less serum or switch to a low concentration of BSA.

Cell viability

- Prime with PBS before dispensing.
- Use Angled (Cat. No.: ST-1030s) or Large Bore (Cat. No.: ST-0080) Cassettes from Steinle for gentle dispensing.

Cleaning & maintenance

- In between runs, use 15-20ml PBS and leave it in the tubings for up to 90 minutes.
- For a longer pause, rinse the tubings with ddh₂O and/or a detergent, lastly prime with 30ml of ddh₂o.
- Let the cassettes dry at room temperature.



Fluid stream

Intact cell monolayer

*Our **Angled Cassettes** (Cat. No.: ST-1030s) and **Large Bore Cassettes** (Cat. No.: ST-0080) are specially designed to avoid cell viability problems, which can occur with cell dispensing. Please get in touch for more information.*