

Magnetic Bead Separation with Bilatest® Kits

Troubleshooting

In case of low yield

- Adapt **sample volume** or **amount of beads** according to sample condition
- **Washing buffers** which contain ethanol **have to be removed sufficiently** otherwise elution will be inhibited
- **Elution time** can be extended when yield is too low; temperature of 55°C leads to better elution
- Thoroughly **mix sample** with **lysis and binding buffer**
- **Incubation time** of sample in lysis buffer can be extended when yield is too low
- Always **resuspend bead pellet** properly after magnetic separation if not otherwise stated (like for last washing step before elution with most Bilatest kits)
- If **water is used for elution** double the elution time; pay attention to the pH (should be above pH 7 to prevent acidic hydrolysis!)

A260/A280 ratio is too high

- **RNA contamination**; add 10 µl Rnase (20 µl/ml) per 100 µl eluate
Repeat protocol omitting the lysis step if necessary

A260/A280 ratio is too high or too low

- **Protein contamination**

Beads have to be resuspended properly during washing steps
Repeat protocol omitting the lysis step if necessary

- **Residual beads in eluate**

(Incomplete magnetic separation causes background in UV-measurement but residual magnetic beads will not effect most downstream applications)

- Centrifugation of eluate and remeasurement with UV

Precipitate in reagent bottle

- Storing temperature too low. Store buffer at room temperature

Degraded DNA

- Sample condition: too many freeze-thaw cycles of sample
- To reduce DNase activity quickly thaw the sample in a 37°C water bath and then put it on ice
- Check pH of water when use for elution (must be above pH 7)