

# Sodium Acetate Precipitation of Small Nucleic Acids

This precipitation can be used to concentrate small nucleic acids from dilute solutions such as the Lower Running Buffer after flashPAGE fractionation.

When less than 2 µg nucleic acid is loaded onto the flashPAGE Fractionator, we recommend overnight sodium acetate/ethanol precipitation with a carrier such as linear acrylamide or glycogen for maximum nucleic acid recovery from the Lower Running Buffer. We do not recommend using glycogen as a carrier for samples that will be used for microarray analysis.

1. Add 2 µl carrier (e.g. linear acrylamide Cat #9520 or glycogen Cat #9510) to the nucleic acid solution and mix well.
2. Add 1:10 volume of 3 M sodium acetate and mix thoroughly; for 230 µl of Lower Running Buffer, this will be 23 µl of 3 M sodium acetate.
3. Add 4 volumes of 100% ethanol; i.e. 1 ml 100% ethanol for 230 µl Lower Running Buffer plus 23 µl 3 M sodium acetate.
4. Mix thoroughly and incubate at -20° C overnight (16 hr).
5. We found that overnight incubation is important for maximizing recovery in this precipitation. (For example 5 hr incubations resulted in significantly lower yield than overnight incubations.)
6. Microcentrifuge at top speed for 30 min at 4° C or room temp.
7. Carefully remove and discard the supernatant.
8. Wash the pellet by adding 500 µl 80% cold ethanol. Microcentrifuge at top speed for 10 min at 4°C or room temp, and carefully remove and discard the 80% ethanol.
9. Repeat the 80% ethanol wash if needed to remove the large salt pellet from the sample.
10. To remove the last traces of ethanol, quickly re-spin the tube, and aspirate any residual fluid with a very fine tipped pipette or syringe needle. Air dry the pellet.