

Unfortunately, the restriction digest was not successful (or only partial) in most cases. This can have several reasons; some are listed [here](#).

To me, a reduced restriction enzyme activity seems likely. Multiple (> 3) freeze-thaw cycles and temperature fluctuations can already have a negative influence on restriction enzyme's activity.

You should be able to use the signals from the undigested plasmids to assign the plasmids.

If the digestion would have worked correctly, a pattern as shown on the figure below was expected. Note, that the smaller fragment might be very difficult to detect in a "real" gel (because small fragments incorporate less of the fluorescent dye).

