

**Sanger Sequencing Protocol by using magnetic beads (Agencourt)**  
**A.R. Del Valle-Echevarria's Lab Notebook (July 23<sup>rd</sup>, 2012)**  
**Modified from the UW Biotech website**

**Before getting started**

After completing the miniprep of your cloned amplicon, take a microliter of pGEM purified plasmid that is at 200 ng/ $\mu$ l and run a gel with one microliter your miniprep samples. This pGEM sample will be your reference for intensity.

Suggestion

|                 |                           |
|-----------------|---------------------------|
| Sample          | 1 $\mu$ l                 |
| 6X Loading Dye  | 2 $\mu$ l                 |
| Gel Green 1:100 | 1 $\mu$ l                 |
| <u>Water</u>    | <u>7<math>\mu</math>l</u> |
| Total Volume    | 10 $\mu$ l                |

**Sequencing Reaction**

|                       |  |
|-----------------------|--|
| Big Dye Buffer        | 1.5 $\mu$ l                                |
| Big Dye Enzyme Mix    | 1.0 $\mu$ l                                |
| Sequencing Primer     | 2.0 $\mu$ l (~3 pmol/ $\mu$ l) *           |
| Miniprep DNA          | - $\mu$ l (100-200 ng for < 20 kb plasmid) |
| <u>Milli Q Water</u>  | <u>- <math>\mu</math>l</u>                 |
| Total Reaction Volume | 10 $\mu$ l                                 |

\*This varies based on the concentration of the primer and remember that pmol/ $\mu$ l is **equal** to  $\mu$ M. In other words, **3 pmol/ $\mu$ l is 3  $\mu$ M.**

**Sequencing PCR Protocol: AVBIOTECH**

This is the cycling protocol the UW Biotech Center uses when they do all the procedure.

96°C for 2 minutes

96°C for 10 sec, 52°C for 15 sec and 60°C for 3 minutes; 35 cycles

72°C for 1 minute (Final Extension)

**Cleanup**

1. Add 5  $\mu$ l of CleanSeq beads to the 10  $\mu$ l reaction.
2. Add 40  $\mu$ l of 85% ethanol and mix seven times.
3. Put on magnetic plate for 3 minutes
4. Remove the liquid and discard. (IN MAGNETIC PLATE)
5. Add 65  $\mu$ l of 85% ethanol. (IN MAGNETIC PLATE)
6. Remove the ethanol as much as possible. (IN MAGNETIC PLATE)
7. Let it air dry for 10 minutes. (IN MAGNETIC PLATE)

8. Remove it from the magnetic plate and add 50  $\mu\text{l}$  of Milli Q water and let it incubate for a minimum of 5 minutes.
9. Put the reaction tubes in the magnetic plate and wait 3 minutes so the beads get separated. Meanwhile, prepare the set of tubes where the reaction is going to be transferred.
10. CAREFULLY, remove the solution and pass it to the new tubes. Make sure that the beads don't get into the solution because it could jam the machine.
11. Go to biotech and submit the order. The option is "Striptubes \$2 a sample", when in doubt, ASK!