Running a DNA gel

Materials:

Agarose
TAE 1x
SybrSafe DNA stain
Loading Dye
DNA ladder (Smartladder)
DNA electrophoresis machine

Protocol:

1、 Dissolve agarose (w/v 0.6% for separating long DNA pieces (>10 kbp), 1% for separating shorter pieces) in 1x TAE by microwaving
2、 Close sides of electrophoresis tray (scotch tape works fine) and add comb
3、 Let solution cool and add 5 µl Sybrsafe to an empty electrophoresis tray (small gels) 10-12 µl Sybrsafe for larger gels
4、 Pour gel until a height of ~0.5 cm. Mix and remove bubbles with pipet tip (fast! It hardens quickly)
5、 Put tray into electrophoresis casing and add TAE until a small layer above the gel can be seen. Remove comb
6、 Add 1 µl loading dye to 5 µl sample, mix and load in the gel. Also add 5 µl smartladder for your reference
7、 Run gel on 80 V (long run)- 110 V (short run, mostly for a 'fast check') for ~40-60 minutes, dependant of gel size, separation acquisition and voltage.