(1) Inoculation culture

1. Purpose of the experiment: to verify the effect of optically controlled amplification.

2. Experimental equipment

2.1. Reagent: overnight culture medium of bacterial solution (2, 3 and 6), DH5 α +dusk-eGFP-pUC57 single colony, LB liquid medium, Amp, 50mg/ml IPTG.

2.2. Instruments: liquid transfer guns and gun heads, test tubes (containing 5ml LB liquid medium), 37℃ oscillating incubator, blue light irradiating device, tinfoil paper, alcohol lamp, etc.

3. Experimental steps

According to the following form, added the corresponding substance to the test tubes with the 5ml LB liquid medium beside the lighted alcohol lamp. 5μl Amp was added to each test tubes. The test tubes of the blue light group were placed in the blue light irradiation device. The test tubes of the light avoidance group were wrapped in tinfoil paper, and then put together in the 37℃ oscillating incubator to culture overnight.

	blue light group	light avoidance group
control group	DH5 α +dusk-eGFP-pUC57	DH5 α +dusk-eGFP-pUC57
experimental group 1	BL21+T7-dusk-eGFP 2 + 5μl 50mg/ml IPTG	BL21+T7-dusk-eGFP 2 + 5μl 50mg/ml IPTG
		BL21+T7-dusk-eGFP 2
experimental group 2	BL21+T7-dusk-eGFP 3 + 5μl 50mg/ml IPTG	BL21+T7-dusk-eGFP 3 + 5μl 50mg/ml IPTG
		BL21+T7-dusk-eGFP 3
experimental group 3	无	BL21+T7-dusk-eGFP 6+ 5μl 50mg/ml IPTG
		BL21+T7-dusk-eGFP 6