

Third Step

Assit. Prof. Alaa Naseer

Lab TOW :-

instruments and equipment in molecular lab

Biosafety cabinet (BSC): is an enclosed, ventilated laboratory workspace for safely working with materials contaminated with (or potentially contaminated with) pathogens requiring a define biosafety level. it found three classes of BSC depending on (providing safety to person, environment and samples)

class I: provide safety to person and environment only.

class II: provide safety to person, environment and samples.

class III: provide safety to person, environment and samples, generally only installed in maximum containment laboratories, is specifically designed for work with more dangerous pathogen like viruses .



Instrument	description	Picture
PCR work station	enclosed, sterilized space work.	
Vortex shaker	To mix the reaction continent	
Cool centrifuge	To participate cell continent	
Conventional PCR	To amplified DNA molecules (quality identification)	

Real-time PCR	To amplified DNA molecules and measuring gene expression(quality and quantity identification)	
Nanodrop	To measuring nucleic acid concentration and purity	
Gel electrophoresis	To separate nucleic acid and protein with molecular weigh less than 10000 bp	
Pulse gel electrophoresis	To separate nucleic acid and protein with molecular weigh more than 10000 bp	
UV-Transilluminator	To detect nucleic acid and protein were separated in gel electrophoresis run	

DNA sequencer	To determine sequence of nucleotide in DNA strand	
Deep freeze	To keep biological material in low temperature	
Micropipettes in different size	To transfer the appropriate amount of volumes	
Different size of eppendorf tubes	To keep and holder samples in experiment	