

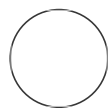


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🌐 UV Exposure Protocol

Martin O Pollard¹

¹Wellcome Sanger Institute



Martin O Pollard
Wellcome Sanger Institute

ABSTRACT

A procedure utilising a UV crosslinker to expose isolated DNA to UV radiation with the aim of inducing lesions in the DNA typical of that kind of damage induced by UV.

MATERIALS

Human Genomic DNA - Human Mixed - G3041 1 × 100μg
UVP Crosslinker CX-2000
Dilution buffer
Gibson P20 pipette
Wide bore tips
Sterile petri dish
Eppendorf tube

SAFETY WARNINGS



Ultraviolet Crosslinkers are a powerful source of ultraviolet radiation. Even though they are not easily accessible, do not attempt to disengage or override the internal safety interlocks. Exposure to the UV radiation may result. If the UV sources remain on when the door is open, the unit is malfunctioning and use should be discontinued until the unit is serviced. Do not expose unprotected eyes or skin to UV radiation. Always disconnect the UV Crosslinker from its electrical supply before servicing.

OPEN  ACCESS



Protocol Citation: Martin O Pollard 2023. UV Exposure Protocol. [protocols.io](https://protocols.io/view/uv-exposure-protocol-cxbixike)
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Protocol status: In development
We are still developing and optimizing this protocol

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PROTOCOL integer ID:
85066

UV treatment

- 1 Pipette  2.2 μL of  Sample which has a measured concentration of  227 $\mu\text{g}/\text{ml}$ from stock tube to sterile plastic petri dish.
- 2 Dilute material in petri dish with  22.8 μL of buffer to achieve a target of  25 μL of DNA at  20 $\text{ng}/\mu\text{l}$ yielding  0.5 μg of DNA. Gently mix but do not agitate vigorously.
- 3 Expose tube to UV light using Crosslinker at 254 nm to exposing the cells to 800 J/m^2 (80000 $\mu\text{J}/\text{cm}^2$)

Equipment

UVP Crosslinker CX-2000

NAME

UV Crosslinker

TYPE

UVP

BRAND

95-0339-02

SKU

<https://www.uvp.com/products/lab-equipment/uvp-crosslinker/>

LINK

254nm wavelength 8W

SPECIFICATIONS



- 3.1 Place sample in Crosslinker drawer
- 3.2 Press the ENERGY button, enter the exposure energy of 80000 microjoules/ cm^2 as 80 on the keypad.
Note: YOUR ENERGY EXPOSURE SETTINGS DISPLAYED MUST BE MULTIPLIED BY 100 to obtain the exposure in microjoules/ cm^2 . If settings are correct, push ENTER on the touch pad.
- 3.3 Press START button to activate crosslinker and wait for cycle to finish.



4 Transfer sample to eppendorf tube.