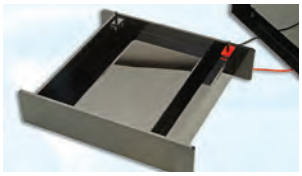


comet assay tanks

- For Single Cell Gel Electrophoresis
- Minimise exposure to light and reduce background DNA damage
- High efficiency cooling for enhanced resolution



Cleaver Scientific COMET assay tanks are available in four slide formats to study single cell gel electrophoresis (SCGE), a technique made popular by drug toxicology and carcinogenesis studies for the detection and quantitation of DNA damage in cells. Each tank's robust construction from ebony acrylic ensures that cells remain free of exposure to background light and DNA damage during electrophoresis, while a cooled central platform provides a convenient surface for slide preparation and control of slide temperature during the assay. Following electrophoresis DNA damage may be measured using Comet Assay scoring software.

Technical Specification				
	CSL-COM10	**CSL-COM20**	**CSL-COM40**	**CSL-COM80**
Slide Capacity	10	20	40	80
Unit Dimensions (W x L x H)	17x34x9cm	31x34x9cm	33x59x9cm	34x115x9cm
Volume	550ml	1000ml	2100ml	4000ml
Recommended Running Conditions	25V/300mA for 1h			

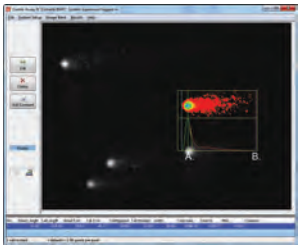


CSL Chiller

The CSL-CHILLER (see page 81 for full details) is available ready assembled with the thermostat mounted on the refrigerator and supplied with insulated tubing and clips to form a system ready to use. Supported by an industry leading 3 year warranty emphasising our confidence in the reliability of our product.

The system comprises of the following:

- 5 litre tank with drain tap
- relay control for refrigeration on/off
- cooling power 140W @ 0°C
- temperature range -20 to 100°C



Full Screen Shot of a Comet Profile
A. The Comet 'Head' comprising largely intact genomic DNA.
B. The Comet 'Tail' of mobile damaged or fragmented DNA.

the comet assay

Background: First introduced in 1981 to quantify double-stranded DNA breakages in single cells exposed to γ-irradiation, the Comet Assay (or SCGE) has since been adapted to analyse specific DNA lesions and repair processes.

Overview: Following genotoxic insult, such as ionizing radiation, the resultant strand breakage of supercoiled duplex DNA reduces the size of the large genomic DNA from which these strands are separated or drawn out by electrophoresis. The genomic DNA then takes on the appearance of a 'comet' as its negatively charged broken ends and fragments migrate towards the anode during electrophoresis.

Method: After exposure to a genotoxic insult cells are suspended within low melting point agarose and embedded within a thin layer of agarose on a microscope slide. Cellular protein is then removed by lysis in detergent, when DNA is allowed to unwind in alkaline conditions before electrophoresis. The DNA is electrophoresed, stained and then analysed using software.

Results: Microscopy imaging is used to measure DNA fluorescence upon staining. In DNA damaged cells the resultant image resembles a 'comet' with the cellular DNA separated into a head and tail. The head is mainly composed of intact genomic DNA, whereas any fragmented or damaged DNA is concentrated within and towards the tail.

Cleaver Scientific also offers Comet Assay software, cameras, microscopes and slide kits, please enquire by emailing **sales@cleaverscientific.com**

Ordering Information			
CSL-COM10	Comet Assay Tank for 10 Slides	**CSL-COM80**	Comet Assay Tank for 80 Slides
CSL-COM20	Comet Assay Tank for 20 Slides	**CSL-CHILLER**	*Chiller unit for active slide temperature control*
CSL-COM40	Comet Assay Tank for 40 Slides		