

## UNSCHEDULED DNA SYNTHESIS

# Sorcerer



Perceptive Instruments have supplied pharmaceutical companies and contract research organisations with image analysis and data processing solutions for regulatory genetic toxicology assays for a decade. For Unscheduled DNA synthesis we have a flexible approach geared to specific needs based upon our Sorcerer automatic image analysis system.

Sorcerer consists of an imaging board which resides in the computer and a monochrome CCD camera attached via a C-mount adapter to the microscope. The live image of the cells as seen by the camera is displayed on the monitor.

Using a three button mouse, the user positions the circular measurement frame on the first cell to be measured and matches the frame boundary to that of the nucleus. A click on the third button initiates a measurement cycle which includes automatic detection of grains taking into account the background stain intensity and shading. The frame is then moved to the cytoplasm and one, or more measurements taken in different regions. Detected grains can be highlighted with a coloured overlay and/or individual count flags.

Sorcerer includes a special algorithm for separating overlapping grains to provide direct counts. Alternatively, grain area can be measured for subsequent computation of an indirect grain count. Measurements are accumulated for each slide and transferred directly using OLE links to Microsoft Excel. A standard template file is available so that clients can produce results tables to their own format. Data may also be sent directly to Microsoft Access or Oracle database tables.

Sorcerer is designed to conform to international GLPs and other regulatory requirements. Encoded audit trail files automatically record all system activity and data. It is fully compliant with the FDA 21 CFR Part 11 Final rule on electronic records and electronic signature.

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INSTRUMENTS

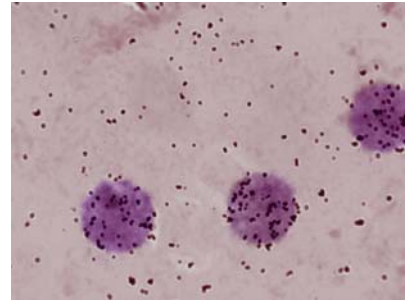




In addition to the standard Sorcerer system, we supply a fully validated suite of software for UDS which is also compliant with international GLPs and FDA 21 CFR Part 11. It features:

Secure password management with validity checks, electronic signature, time-out and expiry.

Flexible study design incorporating up to 8 experiments easily allowing for two time-points, replication or additional treatments. Each experiment can utilise 20 animals subdivided into any combination of dose groups and animals per dose group.



Up to 6 slides can be used per animal and 100 cells per slide.

Optional reserved slides as back-up for additional data collection.

Slide randomisation and de-coding.

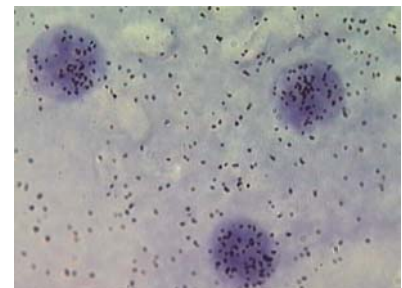
Interactive scoring with prompts and calculation of net grain on a cell by cell basis. Forced entry of reasons for any edits.

Direct and mean grain area count modes with calibration sequence. Up to three cytoplasmic regions can be scored with the mean or highest value used for calculation.

Encoded, secure raw data and audit trail files.

Experimental summary to view data for each slide or experiment.

Calculation of nuclear count, cytoplasmic count, net grain count, net nuclear grains of cells in repair, all with means and SD and % cells in repair.



File compatibility with Microsoft Excel for additional data processing.



Perceptive Instruments Ltd have ISO 9001:2008 approval for our Quality Management System from a UKAS and ANAB accredited certification body.

## PERCEPTIVE INSTRUMENTS

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