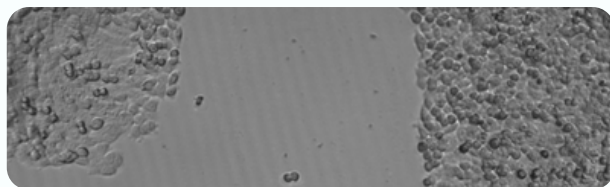


Scratch Assay

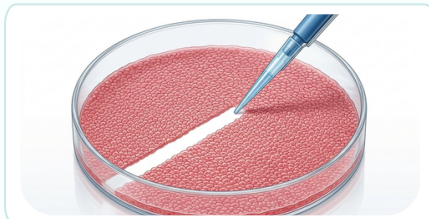
Method Comparison



Where manual methods fail — and how photochemical wound creation solves each problem

1 · Manuel Pipette

MECHANICAL WOUND CREATION



The Problem

Uncontrolled wound width ($\pm 0-60\%$ CV)

Operator pressure, angle and tip size vary with every pass. Results cannot be compared between experiments, operators or labs.

ECM coating physically destroyed

The pipette tip scrapes off the ECM layer in the wound zone. Migrating cells encounter a different substrate than the monolayer — altering migration kinetics.

No real-time monitoring possible

Plate must be removed from incubator for each image. Temperature and CO₂ disruptions affect cell behaviour at every timepoint.

2 · Insert-Based

PHYSICAL EXCLUSION METHOD



The Problem

Artificial gap — no real cell death

A silicone insert blocks cells during seeding. When removed, the gap is debris-free but artificial — no real wound healing occurs. Not physiological.

Insert removal disturbs wound edge

Manual insert removal mechanically stresses cells at the wound border, activating stress responses that confound migration readouts.

ECM blocked beneath insert

The ECM coating cannot be applied under the silicone insert. Migrating cells enter a zone with different substrate properties than the surrounding monolayer.

3 · Transwell / Boyden Chamber

MEMBRANE-BASED CHEMOTAXIS



The Problem

Measures chemotaxis, not wound healing

Individual cell migration through a porous membrane is fundamentally different from collective sheet migration. These assays are not interchangeable.

Endpoint only — no kinetic data

Cells must be fixed, stained and counted manually at one endpoint. Migration velocity, lag phase and drug response timing are completely invisible.

High variability, manual counting

Staining efficiency, membrane handling and operator counting introduce variability. Results are difficult to compare across labs or timepoints.

Solution - Patented Technology – 100% Reproducible

Solution

- <5% wound width CV
- ECM fully intact
- In-incubator imaging

Advantages

- Real physiological cell death
- No mechanical disturbance
- ECM intact in wound zone

Alternative

- Collective migration model
- Full kinetic time-lapse
- Automated AI analysis

Try ScratchMaker Plates — Starter Kit* from €599
zencellowl.com/scratchmaker-plates

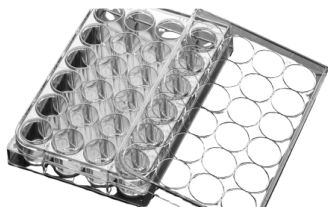
info@innome.de
+49 (0) 89 215 377 00

* Start Kit = 1 Light Mask + 5 Well Plates (choose 6/24 or 96-Well Formate)

The Complete Solution

Standardized wound creation — reproducible results — automated analysis.

SCRATCHMAKER PRODUCTS — WHAT YOU GET



ScratchMaker Plates

PHOTOCHEMICAL CELL DEATH TRUE WOUND HEALING

- Photochemical cell death — real wound healing
- Defined wound geometry — <5% CV
- ECM coating fully intact after wounding
- 6-, 24-, 96-Well format
- Partial plate use possible
- No washing step required

Pricing: on request



Light Mask

REUSABLE · ONE-TIME INVESTMENT

- Clips under plate — no adhesive
- Defines identical wound geometry in all wells
- Compatible with 6-, 24-, 96-Well format
- Reusable — 70% EtOH or autoclave
- Included in Starter Kit

Pricing: One time 200 € (resuble)



Starter Kit

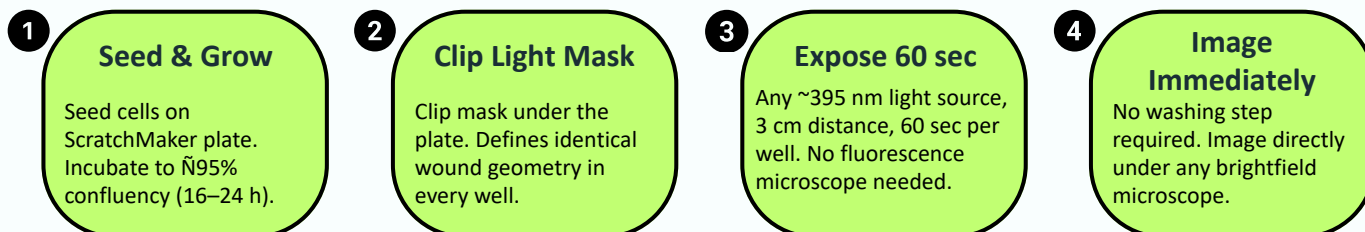
Starter Kit (Plate + Mask + Protocol)

- 5 scratch assay plates — your chosen format
- 1 reusable light mask — matching format
- Step-by-step protocol PDF
- Setup support call included
- Up to 50% off for new customers

Pricing: from €599

BEST VALUE

How it works - 4 steps with scratch maker plates



AUTOMATE YOUR SCRATCH ASSAY

2 · Automated Imaging

zenCELL OWL In-Incubator Live Cell Imager

IMAGING WITHOUT LEAVING THE INCUBATOR

- Sits inside any CO2 incubator — door stays closed
- Continuous brightfield time-lapse every 5 minutes
- 24 wells monitored simultaneously
- No CO2 or temperature disruption
- From €14,000



3 · Analytics

Automated Gap Closure Analysis

AI-POWERED PUBLICATION-READY DATA

- Relative gap area (%) at every 5-minute interval
- t1/2 gap closure time — automated calculation
- Wound closure rate (um2/h) per well
- CSV export for Prism / Excel / R
- ImageJ integration — free, open data

Interested? Call or write to us — Demo available on request!

+49 851 792226 · info@zencellowl.com