

TOTALLY

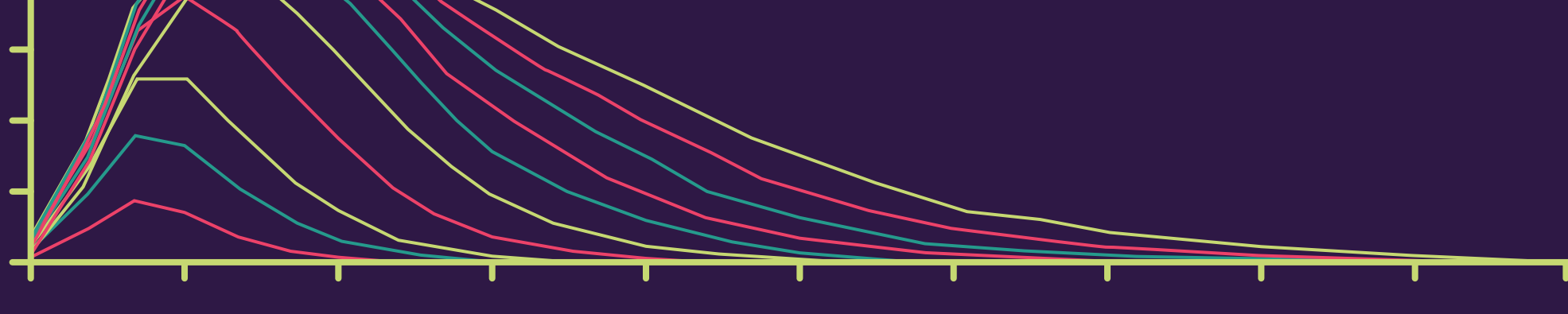
RAD

Radiometric detection (RAD) is one of the most proven techniques for molecular quantitation around – and it's still **indispensable** for key applications. Here's the state of the industry, and where it's headed:

WHY USE RAD?

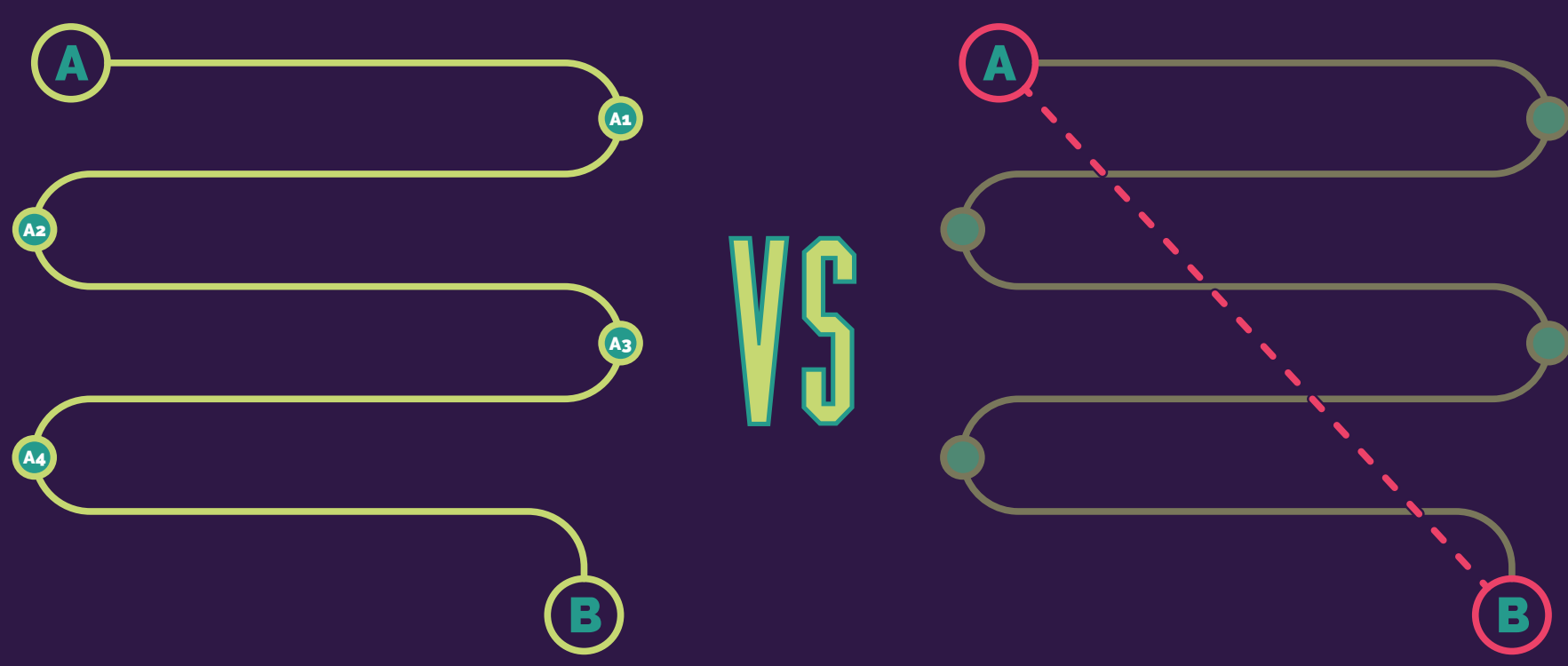
RAD DATA YOU CAN COUNT ON

Get quantitative results in CPM and DPM.



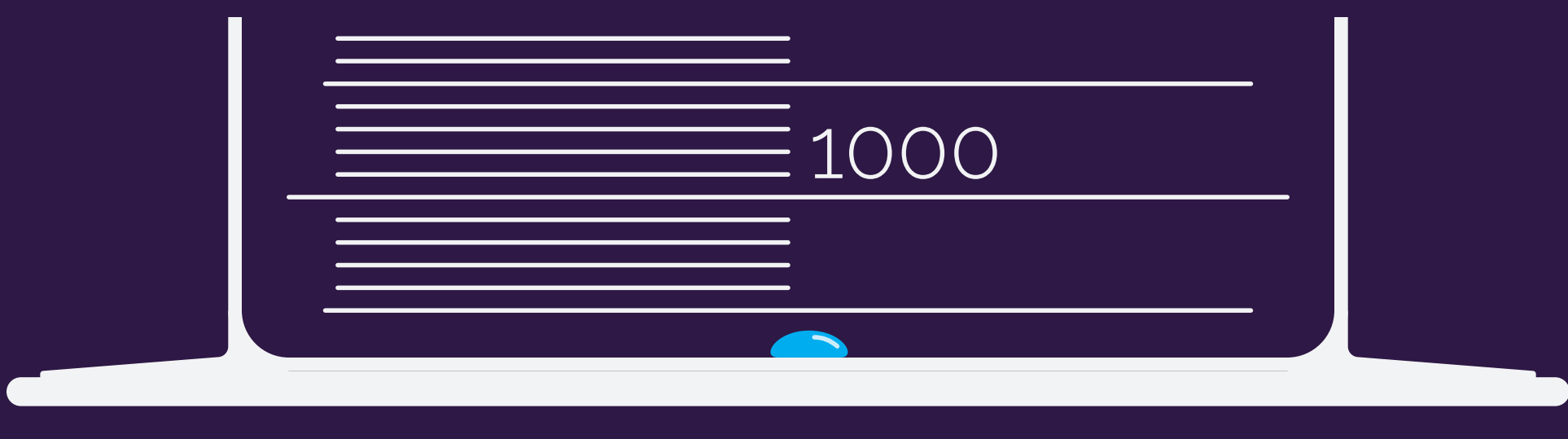
WICKED DIRECT WORKFLOWS

Label, react, and measure – with RAD, it's that easy. This means fewer components, fewer steps, and fewer variables in your workflows.



EXTREME SENSITIVITY

You still can't beat sensitivity with RAD. The ultra low level count mode on PerkinElmer's Quantulus GCT Liquid Scintillation Counter measures ³H water samples to less than 1 Bq/L.



WHEN'S THIS LEVEL OF PRECISION USEFUL?

RECEPTOR-LIGAND BINDING ASSAYS

Used in pharmaceutical studies for measuring a ligand's affinity and method of interaction

GPCR ASSAYS

G-protein-coupled-receptors are seeing success as therapeutic targets in a wide range of diseases

ENVIRONMENTAL MONITORING

RAD offers ultra low level detection for air, water, soil and food monitoring

HEALTH PHYSICS

Bioassays and swipe tests are key for safety monitoring in work environments that use radioactive materials

RAD THEN, RAD NOW

1913:

Future Nobel Laureate Georg Hevesy hypothesizes the "tracer principle," which would be used to detect minute quantities of radioactive substances as they move through a biological system.

1940:

First cyclotron for biomedical research built in Cambridge Massachusetts – producing radioactive elements crucial for the study of living systems like carbon, oxygen, nitrogen and fluorine.

1944:

Samuel Curran and W. Baker build the first electronic scintillation counter in Berkeley, California. Their work remains classified until 1948.

1953:

TriCarb introduced as the first commercial Liquid Scintillation Counter for environmental and personnel monitoring.

2017:

PerkinElmer introduces patented GCT technology which, combined with BGO guard-background reduction, accurately measures near-background samples. Newly-introduced Dual Phase Discriminator* and PSA Histogram* technologies also lower detection limits for unknown mixed samples.

**patents pending*

TRI-CARB AND QUANTULUS GCT LIQUID SCINTILLATION COUNTERS



A RAD Source: An optimized solution of instruments, radiochemicals, cocktails, vials and microplates

User friendly formats for easy data manipulation and ability to reprocess samples without recounting

Count with confidence with Instrument Performance Assessment (IPA) to detect even the smallest change in performance



RAD DISCOVERIES START HERE

When accuracy and sensitivity are critical, we have you covered.

Life science research • Environmental monitoring • Health physics

perkinelmer.com