RapID - *Through-Barrier*
Raw Material ID Verification

cobalt
Insight from Light

Lower Costs and Streamline your QC Workflow

100% ID TESTING *for all incoming containers*

FASTER *ID testing workflow*

REDUCE *operator time and sample-handling booth usage*

NO CONTAMINATION - *Better for quality and operator exposure*

COMPATIBLE *with most containers, APIs and excipients*

Raman is the most practical technique for raw materials ID verification, but it often requires a sampling step, which limits its ease and speed of use. Cobalt's SORS™ technology enables ID of most common materials *through* unopened opaque packaging, unlike conventional handheld Raman devices. RapID is the fastest way to verify pharmaceutical raw materials and the most cost-effective means for high throughput or 100% testing.

RapID eliminates the handling steps of opening and sampling each container, avoiding quarantining, sampling booths and clean-up. RapID fits into the QC workflow of a busy warehouse and its regulatory requirements.

Compatible with most common excipients and containers, RapID's 830nm SORS technology avoids fluorescence from most containers and contents, making it ideal for oral solid dose, biopharma and parenterals manufacturing and *through* a wide variety of packaging.

RAPID - NOSE ADAPTERS

Barcode scanner (1D & 2D) for material, batch and container ID

82mm*
Cylindrical Bottle

44mm*
Cylindrical Bottle

FLAT
General Purpose

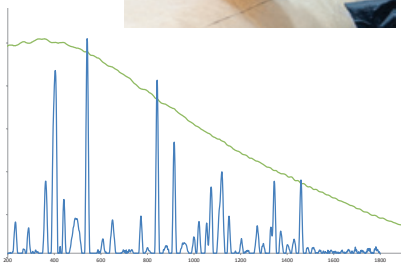
Magnetic retain and release system

Magnetic adapters allow fast measurement of many container types. *Custom size adaptors available on request.

SORS FOR ID
RAMAN WITHOUT BARRIERS

Conventional Raman works for common raw materials, but it needs line-of-sight of the contents, i.e. you have to be able to see clearly through the container. With most packaging handheld Raman instruments don't work. SORS scans *through* containers such as paper sacks without opening and sampling in a booth.

Dextrose-containing multi-layer paper sack



SORS gives a true contents spectrum

Conventional handheld Raman only gives fluorescence

ID Raw Materials on Receipt

Most containers arriving into a pharmaceutical plant are non-transparent, e.g., sacks, tubs, bottles and barrels. All of these packaging materials are incompatible with conventional Raman and so a sampling step is often required. The time and resource impact of the sampling step often reduces the benefit of the fast Raman ID measurement.

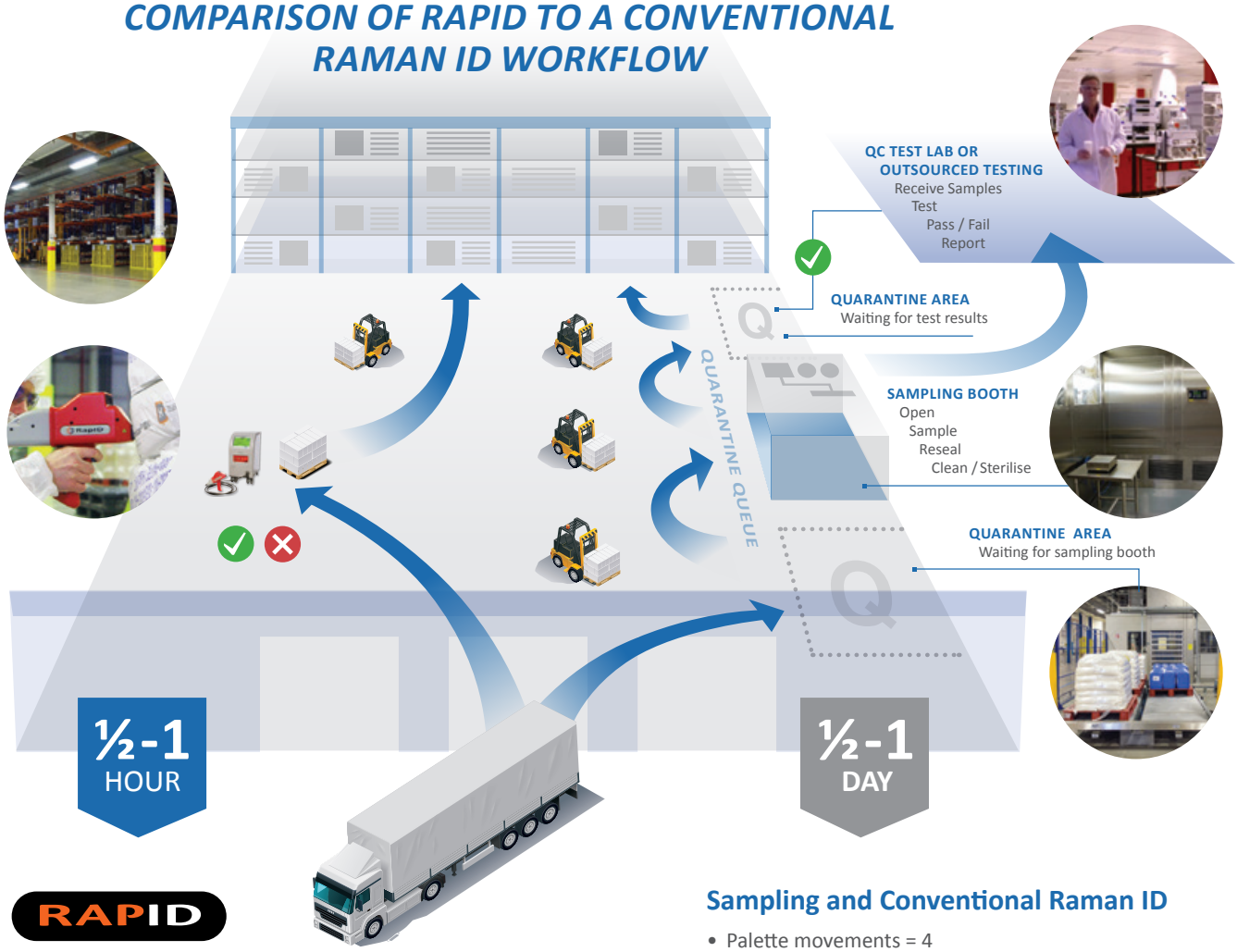
RapID avoids sampling, meaning that goods can be tested quickly in the warehouse on receipt, without quarantining, risk of exposure or contamination.

Maintain sterility, avoid exposure and contamination risks

ID THROUGH THE PACKAGING

- ✓ Avoid sampling booths and quarantine delays
- ✓ Reduce QC lab turnaround times and expensive out-sourced testing
- ✓ Maintain sterility, prevent cross-contamination
- ✓ Preserve shelf-life of unopened products
- ✓ Avoid user exposure to high potency APIs

COMPARISON OF RAPID TO A CONVENTIONAL RAMAN ID WORKFLOW



RAPID

- Palette movements = 2
- Analyst time for ID of 40x lactose-containing paper sacks ≈ 30-60 minutes

Sampling and Conventional Raman ID

- Palette movements = 4
- Analyst time for ID of 40x lactose-containing paper sacks ≈ 1/2 - 1 day using spectroscopic ID
- External QC lab testing adds extra days

Container Compatibility

MEASUREMENT TIMES FOR COMMON MATERIAL / CONTAINER COMBINATIONS	
Mannitol 3-layer paper sack	20 - 30 s
2.5 l amber glass bottle with acetic acid	5 s
Lactose in 1-tonne supersack	10 s
Acetaminophen in plastic bottle	5 s

ORAL SOLID DOSE

- Sugars like mannitol, lactose, dextrose, glucose
- MCC, HPMC, Croscarmellose sodium
- Magnesium stearate
- APIs

PARENTERALS

- Sterile liquids, e.g. phenol
- Salts, e.g. $MgCl_2.6H_2O$, $CaCl_2.2H_2O$
- Amino acids

BIOPHARMA

- Growth media
- Polysorbates 20-80
- Buffers, e.g. Tris

Extending the Possibilities of Raman ID

RapID does everything conventional Handheld Raman systems do but adds the capability to identify materials *through* coloured glass, opaque plastics, FIBCs and multi-layer paper sacks. RapID even works *through* some blue barrels.

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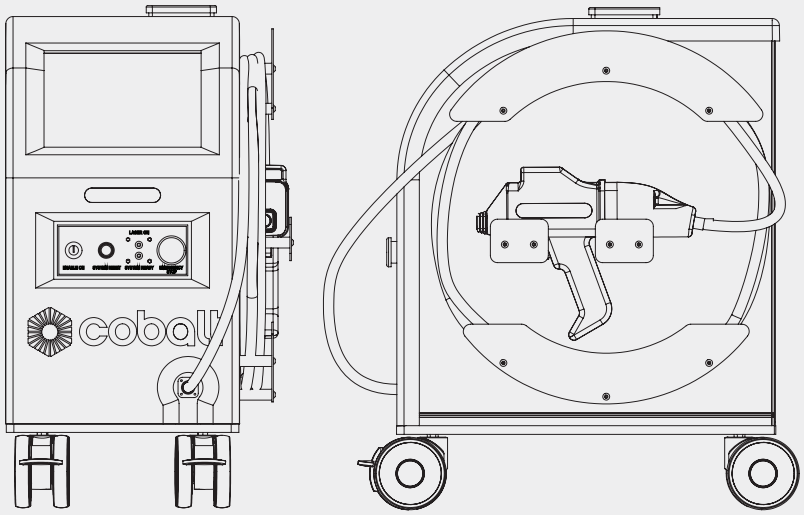
RapID Identifies Materials *Through* the Container

RAPID

RAPID

Portable *Through* Container Raw Materials ID



RapID Software

RapID's intuitive software is 21 CFR Part 11 compliant. With Windows 7 Pro behind the scenes RapID can become part of your wired or wireless network, share folders, printers and user logon credentials, synchronise data and backups, automate LIMS input and keep your data secure.

In routine use, the workflow is optimised for streamlined batch testing, optionally using barcodes for material ID, recording batch information and ensuring that all containers are measured with no accidental repeats.

Adding new materials takes minutes, tuning the performance for container and contents.

Dimensions: 394mm wide / 693mm high / 630mm deep

Laser
- Class 3B
- 830nm

Power
- 90-132 / 180-264 VAC, 47-63Hz

Software
- Includes RapID software
- Windows 7 Pro OS
- 21 CFR Part 11 compliant

Hardware
- Touchscreen operated
- Integral barcode scanner (1D and 2D)

Connectivity
- Domain/network via RJ-45 or WiFi
- USB 2.0

Cobalt Light Systems Ltd.
174 Brook Drive
Milton Park
Abingdon
Oxfordshire OX14 4SD
United Kingdom
UK +44 (0)1235 856555

Cobalt Light Systems, Inc.
Suite 1319,
11951 Freedom Drive,
Reston,
VA 20190, USA
US +1 703 251 4865

info@cobaltlight.com

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