

Automated optical testing for PET-QC

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## A universal new solution for PET/SPECT radiotracer quality control

The Tracer-QC is an automated solution that utilizes only an optical plate reader, a pipetting robot and single-use consumable kits for release testing of PET/SPECT radiotracers.

- ✓ 1 Sample
- ✓ 1 Analytical Instrument
- ✓ All QC Tests
- ✓ 1 Traceable and Objective Report

#### **Ease of compliance**

- No chance of missing a process, record or signature.
- Objective measurements traceable to standards, without any human interaction.
- Data flow from measurement to batch record.
  - Automated.
  - Uneditable.
  - Completely traceable.
- Regular, automated suitability testing with a permanent record.
- Enables FDA 21 CFR Part 11 (Electronic Signatures) and Part 212 (GMP) compliance.
- No cross-contamination with Tracer-QC, as the sample never leaves the disposable kits.
- Ease of (regulatory or internal) audits with instantaneous data retrieval.

#### **Cost reduction**

- Cumulative annual QC cost reduction of 30% or more.
- Fewer and less skilled personnel required.
- Faster and cheaper training.
- Faster and cheaper audits.
- Electronic access/auditing of records.
- Minimise the cost of addressing 483's
- Reduce risk of 483's by around 84%.
- One analytical instrument to maintain.

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#### **Improved safety**

- Reduced risk of radioactive spills and contamination.
- Reduced personnel exposure.
- Single sample.
- Minimal sample handling with the use of a shielded pig.
- Attenuated exposure.

#### **Improved efficiency**

- 1 electronic report with all QC results, automatically generated.
- Run QC unattended from sample to report.
- Increased throughput to enable scale-up.
- No cleaning or equilibration required with Tracer-QC due to the use of a disposable kit.
- Inventory reduction, eliminating the need to track individual expiry dates of multiple supplies/standards.
- Process standardisation across sites and/or products.
- Single sample injection for all analyses.



#### QC tests

- ✓ Colour
- ✓ Clarity
- ✓ pH
- ✓ Kryptofix concentration
- ✓ Endotoxin concentration
- $\checkmark \ {\sf Residual solvents}$
- ✓ Radionuclidic identity (half-life)
- $\checkmark$  Radioactivity concentration
- ✓ Radiochemical identity
- ✓ Radiochemical purity
- $\checkmark$  Chemical purity and specific activity

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#### About Trace-Ability Inc.

Trace-Ability is a growing, California-based company that answered the FDA call for modernisation of testing technologies in radiopharmaceutical production. Years of experience in PET industry allowed the founders to recognise the opportunity to revolutionise and simplify PET-QC testing using optical techniques. The FDA funding and collaboration have enabled optimization and focused validation of Tracer-QC technology.



#### The LabLogic/Trace-Ability Partnership

Trace-Ability have focused on the technical aspects of bringing Tracer-QC to market, including development and validation of the core Tracer-QC technology and production of consumables.

LabLogic leveraged years of experience and expertise in software development, to deliver an intuitive software interface, built with FDA 21 CFR Part 11 (Electronic Signatures) and Part 212 (GMP) compliance in mind.

Commercialisation of Tracer-QC is a joint effort.

New Ba	tch 🚷 🔄	۲					Trac	er-QC"	
	DG-21-04-2021 13:53:35 DG				Start Time 13:54:1 Time Taken 00:00:				Start Preparation
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thanol		< 5.0	PASS	Kryptofix	•••••	< 50	WAITING		
urity		> 90	PASS	рн		4.5 to 7.5	WAITING		•
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# Tracer-QC<sup>™</sup>

Automated system for radiopharmaceutical quality control.



## Tracer-QC MCA<sup>™</sup>





Easy-to-use compliant software

CFR Part 11 (Electronic Signatures) and Part 212 (GMP) compliance.

- Electronic signatures.
- Audit trail.

End Batch

ew Results

- Access levels.
- Maintenance records.
- Automatic reports.
- Direct interface to PETra LIMS.





#### Integrated radio-HPLC Coupling

## **The Process**

1. Scan the consumables kit



1-1

2. Add the consumables to the Tracer-QC



3. Deliver QC sample in a shielded pig



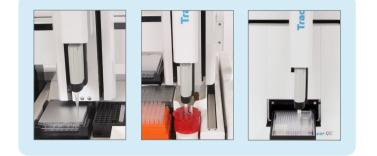
4. Initiate the analysis





Search Tracer-QC on YouTube

#### 5. Tracer-QC mixes and dispenses the sample



6. Tracer-QC analysis starts



#### 7. Analysis is complete

Details									
Rusch Ref:	FDG_QC_2014_11_01_00	Start	01 Aug 2016 @ 15:22:00		Duration:	001200			Stop
Cacuette Ref. Sample_0008		End:	End: 01 Aug 2016 @ 15		Time remaining		0010:00		
Status									
Appearance (Col	a)	Colorless	PASS	Radioactivity a Concentration		ð	440 mG/mi	PASS	
Appearance (Cla	urity)	Clear	RASS	Endotaxin	NA,		<175.EU/mi	PASS	
рН		5-7.5	PASS	Radiochemical Purity			>90%	PASS	
Kryptofix	•••••	100 ugʻmi	PASS	Ethanol	•••		-500ppm	PASS	
Radionuclidic Identitiy (Half Lif	Days Hears Minutes	125-115min		Acetonitrile	• . •		ppm	PASS	

#### 8. Collect the report



## **Tracer-specific Kits**

Trace-Ability have developed kits that are tried and tested for the release criteria of F-18, C-11 and N-13 radiotracers. The kits are available both with or without the HPLC function.



## **Universal Kits**

The majority of the tests available on the Tracer-QC are generic QC tests, which are not tracer specific.

Universal Kits allow users to run these non-tracer specific tests on any sample.

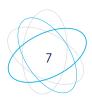
## Research and Development Kits

Research and Development Kits allow users to develop their own kits for QC testing which have not yet been developed by Trace-Ability.

Once a kit has been developed, Trace-Ability are able to supply these kits.







### Service and Support

Users of our systems can benefit from our comprehensive, fully inclusive service and support.

We can give reassurance that if things go wrong or you need expert advice, help is only an e-mail or phone call away.

#### **Validation Services**

Our Validation Service enables you to implement and get maximum value from your investments as soon as possible.

We work as a partner with your Quality Manager, System Manager and users to provide a tailored Validation Plan, suited to your needs. Our Validation Specialists have years of experience in GLP system validation, detailed knowledge of our systems, together with other industry standard systems to help you meet company and regulatory requirements.

#### Training

LabLogic can provide a variety of training courses and workshops to help you get the most out of your instrument and software.

All training is performed by our expert Product and Support Specialists who have many years experience in the development and use of the instruments and software.

Certificates can be provided to complement your internal GLP training records.

#### USA & Canada

LabLogic Systems, Inc. 1911 N US HWY 301, Suite 140 Tampa, FL 33619, USA

E-mail: solutions@lablogic.com Tel: +1-813-626-6848 Fax: +1-813-620-3708

www.lablogic.com



#### Europe & Worldwide

LabLogic Systems Limited Paradigm House, 3 Melbourne Avenue Broomhill, Sheffield, S10 2QJ, UK

E-mail: solutions@lablogic.com Tel: +44 (0)114 266 7267 Fax: +44 (0)114 266 3944

www.lablogic.com





