Bruker Biospin NMR and Q-Band Electron Paramagnetic Resonance Equipment Upgrades to Expand Research Capabilities and Replace End of Life Instrumentation

BASE REQUIREMENTS:

1. Item# BH1410 - Qty (2) PC

CryoPlatform (water cooled)

CU/5 based He CryoPlatform basic system supporting HR NMR He CryoProbes.

Package includes:

- Cryo Cooling Unit/5 (CU/5)

- Water cooled indoor He-compressor

- Cooling water monitoring kit

- 6 meter indoor He-flexline set with sound insulation

- Transferline support set to absorb vibrations

- Mounting system for He CryoProbe

- He gas bottle adaptor with 10 meter flexible line

2. Item# BH0551 – Qty (2) PC

CryoProbe Sample Protection Accessory

CryoProbe emergency VT and sample lift gas supply accessory.

Features:

- Provides emergency VT gas in case of probe VT gas outage

- Ejects NMR samples in case of sudden vacuum loss in cold state

3. Item# LS_PRODIAGNOSE – Qty (1) PC

LABSCAPE PRODIAGNOSE

Allows the connection of NMR systems to Bruker's AutoDiagnose platform

which currently offers the following features*:

- Health Status Overview over all connected systems at a glance

- System Configuration

- Integrated cryogen level Overview

- Integrated platform notifications

- Email notification free trial

- Easier root cause analysis for technical issues

4. Item# A1452 – Qty (2)

On Site Labor Day

5. Item# BGZONE 13 - Qty (2) PC

Local Zone charge

6. Item# B190040 – Qty (1) PC

EPR Q-Band Pulse Amplifier 100 W (back)

100 W Q-Band solid-state Amplifier for Pulsed EPR Spectroscopy

100 W Q-Band solid-state amplifier featuring:

• Operation Frequency: 33 to 35 GHz

• Maximum peak power: 100 W

• Typical gain: 70 dB

• Maximum duty cycle: 5 %

• Input connection: 2.92 mm

• Output connection: WR-28

• Integrated monitor port

• TTL blanking

• Output located on the back

7. Item# B190253 – Qty (1) PC

EPR Q-Band 100 W SSA, E580 Con. Kit

Q-Band 100 W SSA, E580 Connection Kit

Q-Band 100 W SSA, E580 Connection Kit featuring:

• Power adapter

• WR-28 to 2.92 mm adapter

• 2.92 mm Semi-rigid cables

8. Item# B190013 – Qty (1) PC

EPR Probe QLP-1.6
Q-Band Resonator for Pulsed EPR Spectroscopy (1.6 mm)
Q-Band loop-gap resonator featuring:
• Loop gap resonator, operating at 34 GHz (exact frequency tbd)
• B1 conversion factor: > 12 G/□W (critically coupled), > 5 G/□W (fully overcoupled)
• Resonator bandwidth: > 400 MHz (overcoupled)
• Maximum sample OD: 1.6 mm, recommended sample height: 4 mm
• Operating temperature: 2.4 K to RT (compatible with CF935 cryostat)
• Integrated temperature sensor
• Probe leak rate < 10e-8 Torr l s-1
• Optical access

9. Item# A1452 – Qty (2)

On Site Labor Day

10. Item# BGZONE 12 – Qty (1) PC

Flat Zone Charge

11. Z176227 -Qty (1) PC

CP2.1 MNI 600S3 H&F-P/C/N-D-03 Z – Qty (1) PC

12. Item# A1452 - Qty (2)

On Site Labor Day

13. Item# BGZONE 13 – Qty (2) PC

Local Zone Charge

The following are Optional Items/Equipment:

1. **Item# B190013 – Qty (1) PC**

EPR Probe QLP-1.6
Q-Band Resonator for Pulsed EPR Spectroscopy (1.6 mm)

Q-Band loop-gap resonator featuring:

- Loop gap resonator, operating at 34 GHz (exact frequency tbd)
- B1 conversion factor: > 12 G/√W (critically coupled), > 5 G/√W (fully overcoupled)
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- Operating temperature: 2.4 K to RT (compatible with CF935 cryostat)
- Integrated temperature sensor
- Probe leak rate < 10e-8 Torr l s-1
- Optical access

2. **Item# B190335 – Qty (1) PC**

EPR Compact-Q Full System w/o Res
Compact-Q Full System without Resonator

Comprising:
- Digital Pulse EPR Bridge
- 100 W Solid-State Q-Band Amplifier
- Digitizer and AWG
- Compact, Liquid Cryogen-Free Magnet and integrated VTI (max. 1.5 T)
- Q-Band Frequency Extension and Circulator
- Windows Workstation, with SpecMan Acquisition Software
- Console with Magnet Power Supply, and Temperature Controllers

3. **Item# BH1410 – Qty (4) PC**

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4. Item# BH0551 – Qty (4) PC

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Features:

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- Ejects NMR samples in case of sudden vacuum loss in cold state

5. Item# A1452 – Qty (2)

On Site Labor Day

6. Item# BGZONE13 – Qty (2) PC

Local Zone Charge –