



## PQ001 NMR analyzer for Spin Finish

### Specifications

- **Magnet:** Permanent; 0.5±0.08T
- **Probe:** Ø25mm
- **Magnet temperature:** Fixed (32°C nominal)
- **Dimensions (L, W, H):**  
1685mm×520mm×386mm

### Summary

- Rapid, Non-destructive, Solvent-free
- Accurate
- Reliable
- Cost Saving
- Low Maintenance

### Features

- **Testing time:** Less than 2min per sample
- **Measuring Range:** Spin finish range from 0.1%-10%;
- **Accuracy:** 0.1% error for 5% oil content; 0.05% error for 0.5% oil content;
- **Repeatability:** RSD less than 2% (N=8);
- **Stability:** RSD less than 2% (Within 10 days)
- **Software:** Easy to use, multi-language.

### Application

Finishes are usually spread on fiber in production to make fiber antistatic, gathered and smoothed and thus to facilitate downstream processing. Uneven finish will cause quality problems such as uneven yarn and broken filament. As a result, it is quite necessary to test the finish content promptly in fiber production. NMR technique, as one of the testing standards, has such obvious advantages as its high-speed, simplicity, stability, no need of dissolvent or other consumables.

### ● PQ001 NMR analyzer

PQ001 is a high-quality desktop NMR analyzer for finish content measurement based on signal of hydrogen (Chemical fibre, such as polyester fibre, polyamide fibre, textile fibre, polypropylene, spandex, cellulose, etc.). With the application software installed, PQ001 offers functions including oil content measurement in fibre, working curve drawing, data query and export. The measurement of oil content is easy to operate and its results are accurate and reliable. The PQ001s have been broadly installed in Southeast Asia, Japan, Korea, etc. with great praises.

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# Make the best LF-NMR

## Accuracy

Sample No.	Oil (Reference ) / %	Mean Value(NMR) / %	Difference
T-1	0.150	0.105	-0.045
T-2	0.450	0.448	-0.002
T-3	0.200	0.244	0.044
T-4	0.210	0.214	0.004
T-5	0.150	0.143	-0.007
T-6	0.147	0.120	-0.027
N-1	1.000	0.975	-0.025
N-2	1.200	1.203	0.003
N-3	1.300	1.329	0.029

## Repeatability

Test No	Sample No.	Measured Oil Content in %		
		T-8	T-9	N-4
1		0.134	0.367	0.968
2		0.143	0.392	0.970
3		0.145	0.357	0.954
4		0.127	0.358	1.006
5		0.148	0.398	0.992
6		0.137	0.354	0.952
7		0.131	0.368	0.981
8		0.135	0.344	0.988
Mean		0.138	0.367	0.970
STD		0.007	0.019	0.019

## Stability

Day	Sample No.	Measured Oil Content (%)		
		T-10	T-11	T-12
1		0.225	0.362	0.478
2		0.246	0.398	0.476
3		0.244	0.398	0.451
4		0.234	0.400	0.468
5		0.228	0.407	0.490
6		0.232	0.418	0.465
7		0.229	0.390	0.460
8		0.244	0.388	0.470
9		0.245	0.393	0.467
10		0.222	0.399	0.465
Mean		0.235	0.395	0.469
STD		0.009	0.015	0.011

## Calibration & Measurement

### 1. Preparation



Spin Finish  
Software

### 2. Calibration



### 3. Measurement



### 4. Result