



## Спектрометр SpinPulse CX-20

### Технические характеристики

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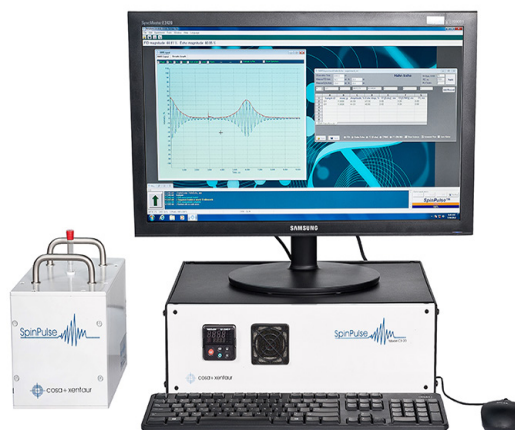
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## SpinPulse™ Pulsed Spectrometer



The SpinPulse™ brings affordable NMR Technology for many common used applications.

- Cost Effective
- High Performing
- Fast Measurement
- Very Accurate
- Small Footprint
- Low Weight



## Description

The SpinPulse™ CX-20 is a high-quality, economical time domain NMR (TD NMR) analyzer that is ideally suited to applications in the agri-food, petrochemical, pharmaceutical, plastic- and rubber industries.

Three versions of the SpinPulse™ are available: The CX-20/10 (10mm Probe), CX-20/20 (20mm Probe) and CX-40/40 (40mm Probe) and easily handle any sample matrix a customer may encounter.





# SpinPulse™

## Pulsed Spectrometer

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### General Specification

- Spectrometer frequency range: 2-60 MHz
- Probe/Magnet frequency range: 15-25 MHz
- Modular Magnets to accommodate 10, 20 and 40 mm Sample Tubes
- Adjustable TX output power
- Adjustable RX channel gain
- Adjustable digital filter bandwidth
- Complete control of functions via personal computer
- PC communication via standard USB 2.0 or higher
- Compatible with all Microsoft® Windows® operating systems
- Power Requirements: 100-240VAC, 50/60Hz, 300VA

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#### Dimensions (LxWxH)









CX-10 (10mm).....	5.81" x 9.55" x 7.05"	(150 x 240 x 180mm)
CX-20/40 (20/40mm).....	12.08" x 9.18" x 1 0.83"	(200 x 250 x 210mm)
Spectrometer.....	17.75" x 14.50" x 5.37"	(450 x 370 x 137mm)

#### Weight:

CX-10 (10mm).....	30 lbs (13.6 kg)
CX-20/40 (20/40mm).....	175 lbs (80kg)
Spectrometer.....	15 lbs (6.8kg)



## Applications

	<p><b>Solid Fat Content (SFC) Determination in cocoa, chocolate, fats, oils and margarines</b> by following AOCS Cd 16b-93, AOCS Cd 16-81 ISO 8292 and IUPAC 2.150 methodology. The quality of food products containing fats and oils is highly dependent on solid fat content (SFC). SFC determination is an essential measurement parameter in the baking, confection-ary, oil and fat industries.</p>
	<p><b>Oil and Water in Seeds and Nuts</b> following ISO Methods 10565 and 10632. Sunflower, soybean, groundnut, rape, mustard seeds and other similar products are all valued for their oil content but water above certain levels reduces their value and shortens their storage/shelf life. An accurate and fast determination of oil and water content is critical to producers, proces-sors and customers of these products.</p>
	<p><b>Rapid, Simultaneous Determination of Fat Sugar and Water in Chocolate, Cocoa Powder and Cacao-based Products.</b> Storage time and shelf life of food products is strongly influenced by moisture content. Excessive moisture content leads to microbiological activity, spoilage and unsafe products for human and animal consumption. Fat and moisture content also influences appearance and taste.</p>
	<p><b>Fat and Moisture Content in Milk Powder</b> Fat and moisture content is critical in the manufacturing of milk powder and the food indus-try in general. Other analytical techniques for fat and moisture content determination entail significantly longer analysis times, consume costly reagents and chemicals and generate hazardous waste solvents.</p>
	<p><b>Evaluation of a Porous Structure in Cheese</b> Time-intensive cheese fermentation starts with the structural formation of very small pores. The prediction this “pre-cheese” will develop the quality of the desired end product is pos-sible by measuring with TD-NMR the distribution of the Spin-Spin/Spin-Lattice relaxation times and diffusion coefficients</p>
	<p><b>Estimation of Solid Protein Content in Milk-based Products</b> Low resolution TD-NMR can give information about the solid protein content in many different types of dairy products and is an extremely useful analysis in their processing and manufacturing.</p>
	<p><b>Curing Degree and Elasticity Analysis in Rubber-type Materials</b> Rheology for many years has been a widely used methodology in rubber investigations but rheology instrumentation can be extremely expensive and complicated to own and operate. TD-NMR is very sensitive to the structure and properties of elastomer materials. The Spin-Pulse TD-NMR spectrometer yields data that is complementary to rheology data and in many instances is more informative .</p>
	<p><b>New Research and Scientific Investigations</b> Typically, scientists who purchase the SpinPulse™ TD-NMR for research create their own experiments and pulse sequences. Numerous articles on the application of low-resolution TD-NMR appear in peer-reviewed journals annually. R&amp;D activity utilizing TD-NMR helps to establish new industrial techniques and processes.</p>



## SpinPulse™ Pulsed Spectrometer

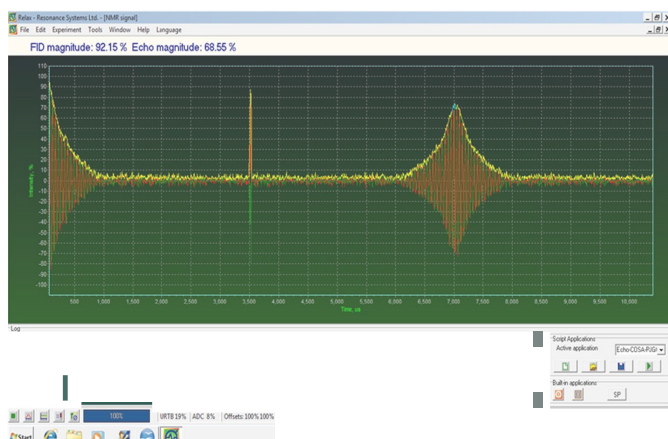
### Academic Classrooms- Teaching Students

The SpinPulse TD-NMR can be used by students in educational and classrooms settings for both demonstrations and practical training in quantum physics, chemistry, physical chemistry, geochemistry, electronics and electronic signal processing.

The SpinPulse™ NMR measurement possibilities are not limited to the applications outlined above. To see how the new standard in compact TD-NMR can help you meet your company's target and goals contact COSA Xentaur today.

### RelaXent™ Software

The RelaXent Software includes standard TD-NMR relaxation routines. Pre programmed applications and resonance auto-tuning are easily performed by a single click of the mouse. In addition, the powerful software offers the user the ability to design simple to complex measurement routines through adjustment of the pulses, gains and attenuations of the SpinPulse™ spectrometer. Direct processing of spectra data enables the operator to customize measurements around a variety of parameters; including but not limited to pulse sequences, TX power and RX sensitivity, frequency and repetition periods. The built-in, Pascal based syntax script language supports dialogue windows, static messages, data manipulation procedures and user defined diagrams. The RelaXent standard software package includes built-in fitting routines, Fourier and Laplace transforms, interface windows, MS Excel® tables, user graphs and report generation.



**По вопросам продажи и поддержки обращайтесь:**

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