

# One-Minute NMR Technology Fact Sheet

November, 2004

*	<i>Easy</i>
<b>Open Access</b>	Ease of use, security, accounting, multiple spectrometer support, sensitivity, speed, and common sample formats brings NMR to more applications than ever.
<b>Easy Graphical Sample Entry</b>	Pick solvent, experiment(s), and sample location and click run.
<b>Single Web Page</b>	Operator control panel with steps labeled 1, 2, 3 for sample login. Works with IE, Mozilla, Netscape on Windows/UNIX/Linux/Macintosh.
<b>One-Minute Plate Login</b>	Choose plate name and experiments, then shift-click to select whole or partial plates.
<b>Sample List Import</b>	CSV file import with custom import templates allows plates from MS to be
<b>Priority Samples</b>	Keep the system busy with plates/arrays, but interrupt with individual samples,
<b>Night Samples</b>	For long-running samples that take priority at night, but do not run during the day.
<b>Direct-Edit Sample Grid</b>	Alternative sample grid with direct editing of rows for entering detailed sample and experiment information
<b>Remote Intranet/Internet login</b>	Log in samples and monitor status from your spectrometer, desk, lab, or home.
<b>Multiple Configurable/Selectable NMR Experiments</b>	One or more NMR experiments are selected from a list and run in the order specified. All existing experiments suitable for the CapNMR probe can be used.
<b>E-mailed Alerts and Completion Messages</b>	Uses your e-mail server to send batch completion reports and error alerts. Errors are sent to a list of administrators.
<b>Direct-Edit Sample Grid</b>	Alternative sample grid with direct editing of rows for entering detailed sample and experiment information
<b>Consistent Interface</b>	The same easy operator interface for all spectrometers.
*	<i>Secure</i>
<b>Data Overwrite Protection</b>	Overwrite protection as samples are entered and before each sample is run. Rules allow data to be saved to safe locations.
<b>Password Security</b>	User protection with permissions for selecting other's samples, user administration, and changing automation settings.
<b>Run Lockout</b>	Remote systems can be prevented from starting the NMR while allowing samples to be logged in and status monitored from your desk.
<b>Error Handling, Retry and Recovery</b>	Errors reported on web page and by e-mail. Errors are recoverable and your sample is never lost.
<b>Optimized TCP/IP Spectrometer Interfaces</b>	Closed-loop spectrometer control and feedback through TCP/IP link. Optimized for speed, security, and error correction/detection.

# One-Minute NMR Technology Fact Sheet

November, 2004

* <b>Controllable</b>	
<b>Administration</b>	Web-based user administration. User-based permissions, e-mail, NMR account information.
<b>Accounting</b>	Users run samples under one or more accounts. Run time is tracked by sample, user, or account. System operators may use multiple accounts.
<b>Individual User Directories</b>	NMR data directories are associated with user accounts. Directories are created when new users are created.
<b>Sample Data Overview</b>	Drop-down queries to find out how many samples ran, by whom, when, what the results are, and where they are located.
* <b>Expandable</b>	
<b>Open SQL Database</b>	Standard SQL database allows ODBC connections from custom programs for connection to Enterprise Software systems.
<b>Macro Capability for LEAP, HTSL, and NMR</b>	Enables special operations such as combining reagents with a sample before a run, or addition of stabilizer after a run.
* <b>Technology</b>	
<b>CapNMR, <u>The Probe For Everyone</u></b>	Excellent for most solution-phase NMR samples including small molecules, lipids, proteins, peptides, salty samples, tiny samples, and metabolites.
<b>Low Sample Volume</b>	Samples as small as one microliter and up to 12 microliters can be used.
<b>Intelligent Automatic Solvent Selection</b>	Three selectable degassed solvents with intelligent switching to prevent immiscibility problems
<b>Flexible Injection Sequence</b>	Adjustable numbers of pre-washes, post washes, injector cleans, sample pickup volumes, filter rinse, fluidic speed, and macros.
<b>High Throughput</b>	Super-sensitive probe and fast liquid handler runs to 1000 1H NMR samples per day.
<b>Low Maintenance Costs</b>	High sensitivity without electric bills, maintenance fees, special citing requirements, and extensive down-time.
<b>Sample Return</b>	Samples are optionally returned to their original vial or a mirror plate.
<b>Embedded Web Server</b>	Pre-configured web server embedded in Discovery Tower platform.
<b>Automatic Dilution</b>	Dilution immediately before injection for samples that easily oxidize, are vulnerable to solution phase, or that you don't want dilute manually.
<b>Automatic Probe Wash</b>	Keep the probe clean with a wash every Nth sample. Use solvent, acid, detergent or enzymes.
<b>Sample Filtering</b>	Samples are automatically filtered with a pre-injector 2 micron filter.