



INTRODUCING

**Gonotec® Osmomat®
Freezing Point Osmometer**

ASM Launch, January 2022
Prepared by: EBS Marketing

Topics of Discussion

- ✓ Osmometry Review
- ✓ Gonotec® Product Portfolio Integration
- ✓ Gonotec® Osmomat® Features
- ✓ Live DEMO
- ✓ Sales Targeting
- ✓ Competition
- ✓ What's in the Box?
- ✓ Marketing & Support



Osmometry Review



An Osmometry Review

Two primary techniques

- ◆ An osmometer is a device for measuring the osmotic strength of a solution, colloid, or compound, and useful in determining the molecular weight of unknown compounds and polymers
- ◆ They are beneficial for determining the total concentration of dissolved salts and sugars in blood or urine samples
- ◆ TWO primary techniques employed in osmometry:
 1. **Vapor pressure osmometers** determine the concentration of osmotically active particles that reduce the vapor pressure of a solution
 2. **Freezing point depression osmometers** may also be used to determine the osmotic strength of a solution, as osmotically active compounds depress the freezing point of a solution

Biomedical Systems Product Portfolio

gonotec Integration





Osmometer Products



VAPRO® Model 5600 ● Vapor Pressure Osmometer

Intended for use by trained technical personnel to determine the osmolality concentration of a water based solution by means of the dew point temperature depression of a specimen sample.



Gonotec® Osmomat® /Osmomat® Basic ● Freezing Point Osmometer

Intended for laboratory use by qualified personnel for the determination of total osmolality of aqueous solutions. This is done by using freezing point depression.



Gonotec® Osmomat® Auto ● Freezing Point Osmometer

Intended for laboratory use by qualified personnel for the automated determination of total osmolality of aqueous solutions. This is done by using freezing point depression.

Standards

Intended for use exclusively with ELITechGroup Osmometers.



Gonotec® Osmomat® Features



Introducing

Gonotec® Osmomat® Freezing Point Osmometer

Intended Use

Intended for laboratory use by qualified personnel for the determination of total osmolality of aqueous solutions.



Superior Features for Labs

- ◆ Controlled easily via a touch screen display
- ◆ Step by step user guidance through all measurement functions
- ◆ Two-or-three point calibration
- ◆ Robust design of the instrument makes it easy to handle and maintain
- ◆ Automatic calibration using Gonotec's calibration standards
- ◆ Last result remains available after switching to automatic stand-by mode
- ◆ QM assistance for the laboratory supervisor
- ◆ For data transfer to a PC it can be connected via USB or RS232

MEASUREMENT TECHNIQUE

- ◆ The total osmolality of aqueous solutions is determined by comparative measurements of the freezing points of pure water and of solutions
- ◆ Water has a freezing point of 0°C, a solution with saline concentration of 1 Osmol/kg has a freezing point of -1.858°C

SAMPLE TYPES

- ◆ Volatile Solutions
- ◆ Non-volatile Solutions

CONSUMABLES

- ◆ 300 Calibration Standard
- ◆ 850 Calibration Standard
- ◆ Measurement Vessels
- ◆ Pipettor Tips



Gonotec® Osmomat® Models and Variations



FreezePoint® Model Number	Corresponding Gonotec® Model Number	Size and Printer Configurations
FreezePoint® 6000	Osmomat® 3000-M	<ul style="list-style-type: none"> • 15ul Sample Size
FreezePoint® 6000P	Osmomat® 3000-D-M	<ul style="list-style-type: none"> • 15ul Sample Size • Built in Printer
FreezePoint® 6000S	Osmomat® 3000	<ul style="list-style-type: none"> • 50ul Sample Size
FreezePoint® 6000SP	Osmomat® 3000-D	<ul style="list-style-type: none"> • 50ul Sample Size • Built in Printer



Live Demo



Sales Targeting & Market Expansion



Market Expansion into **New** and Existing Markets

Offering the market a complete line of osmometers for:
in vitro diagnostics □ biotech □ chemical □ environmental
food & beverage □ pharmaceutical □ research



Gonotec® Osmomat® Freezing Point Osmometer

- Ideal for dilute biological and aqueous solution
- Automatic calibration, and measurement of samples in 60 seconds
- Urine, plasma, serum
- Routine osmolality testing in Biopharmaceutical labs of biological drugs
 - Development
 - Final control
 - Manufacturing



Vapro® Vapor Pressure Osmometer

- Ideal for dilute biological and aqueous solution
- Measures viscous and **tissue** specimen for industrial and research applications
- Tissue, fluids, gels, leaves, blood, etc.



Competition



Competitive Comparison

Gonotec® Osmomat® Freezing Point Osmometer



Feature	Gonotec® <i>Osmomat® 3000 Freezing Point Osmometer</i>	Advanced Instruments <i>Osmo1 & OsmoTech</i>	Advanced Instruments Fiske <i>210 Micro Sample</i>	Precision Systems <i>Micro-Osmette</i>	Precision Systems <i>6002 Touch Micro Osmette 30</i>
Osmolality	Aqueous solutions	Aqueous solutions	Aqueous solutions	Aqueous solutions	Aqueous solutions
Automated Calibration	2-3 point	2-3 point	No	2 step	Step by step
Test time	1 minute	90 sec	90 sec	50-70 sec	90 sec
Sample volume	15/50µL	20µL	20µL	50µL	30µL
Touch screen	5.7" LCD	Yes	No	No	Yes
Built-in user guide	Yes	Yes	No	No	No
QM assistance	Yes	No	No	No	No
Sample handling	Yes	Yes	Yes	Yes	No
Printer	Optional On board	On board	No	No	No
PC data transfer	USB RS232	USB(3) Ethernet	No	No	No
Barcode reader	Optional	Integrated	No	No	No
Price – List prices	\$11,995	\$26,650	\$19,000	\$12,940	\$8,895
Range	3000 mOsmol/kg	2000 mOsmol/kg	2000 mOsmol/kg	3000 mOsmol/kg	2000 mOsmol/kg

Primary Competition: Advanced Instruments

Handout



How to Select the Appropriate Osmometer - Biotech & Industry

It's easy to select the best osmometer for your laboratory needs

There are a variety of factors that go into choosing the right osmometer including the number of samples tested daily and the required level of automation.



Osmometer- Biotech & Industry:	A ₂ O® Advanced Automated Osmometer	OsmoTECH® PRO Multi-Sample Micro-Osmometer	OsmoTECH® XT Single-Sample Micro-Osmometer	OsmoTECH® Single-Sample Micro-Osmometer	ELITechGroup FreezePoint® Freezing Point Osmometer	ELITechGroup VAPRO® Vapor Pressure Osmometer	Gonotec® Osmomat™ Freezing Point Osmometer Auto
Workflow Features							
Best for labs with daily sample processing needs of	>10/day	>10/day	1-10/day	1-10/day	1-10/day	1-10/day	>10/day
Sample volume	100 µL	30 µL	20 µL	20 µL	15 or 50 µL	2, 10, 20, or 60 µL	50 µL
Sample introduction	Automated liquid handling sample cup	Sample cup	One-step direct	One-step direct	Sample cup	One-step direct	Automated menu
Operating range (mOsm/kg H ₂ O)	0-4,000	0-2,000	0-4,000	0-2,000	0-3,000	20-3,500	0-2,500
Test time (seconds)	180	90	≤ 150s in low range; ≤ 190s in high range	90	60	90	-70
Compliance Support Features							
Supports 21 CFR Part 11 & EU Annex 11 compliance		●	●	●			
Supports pharmacopeia testing guidelines compliance	●	●	●	●			
Electronic signature (Review & approve)		●	●				
Instrument Features							
Integrated barcode scanner	●	●		●	● ¹	● ¹	● ¹
Printer	●	● ¹	● ¹	● ¹	● ¹	● ¹	●
Multi-language, touchscreen display	●	●	●	●	●	●	●
Username & password capability	●	●	●	●		●	●
Multi-sample capacity	●						●
Automated cleaning between samples	●	●				●	
Automated sample pipetting	●						
Data Management Features							
TCP/IP	●	●	●	●			
USB	●	●	●	●	●	●	●
Webserver for remote data viewing		●	●	●			
Network share							
Automatic backup							●
Control device remotely via OPC-UA							
Results not affected by viscous and alcohol solutions						●	
Levels of users access	2 Levels	3 Levels	3 Levels	3 Levels	3 Levels	1 Level	3 Levels
Data Format	.csv	.csv & pdf	.csv & pdf	.csv & pdf	.csv	Software Interface	.csv





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¹ Accessory is sold separately or optional

Competition

International



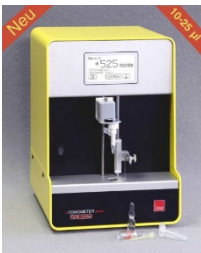



Company	Precision Systems	Precision Systems	Knauer	Arkay
PRODUCT NAME	Touch Micro OSMETTE® 30 µL Osmometer	5010 OSMETTE III Fully Automatic 10 uL Osmometer	K-7400S Semi-Micro Osmometer	Osmo Station OM-6060
Image				
Performance Claims	0 to 2000 mOsm/kg	0 to 2000 mOsm/kg	0 to 2000 mOsm/kg	0 to 2500 mOsm/kg
Product Competition	FreezePoint	FreezePoint	FreezePoint	Osmomat Auto
Differentiation (feature)	None	Smallest Sample Size on the Market	None	Up to 24 sequential samples
Regulatory/Regions	FDA	FDA	CE	
Manufactured	USA	USA	Germany	Japan
Lab Samples Recommended	1-10/day	1-10/day	1-10/day	>10/day
Threat				
Technology Advancements		10 uL Sample Size		
Positioning				

Competition

International



Company	Löser Messtechnik	Löser Messtechnik	Löser Messtechnik	Löser Messtechnik
PRODUCT NAME	Osmometer basic M 10µl or 50µl	Osmometer basic 50µ or 100µl	iOsmometer basic M 10µl or 50µl	iOsmometer basic 50µ or 100µl
Image				
Performance Claims	0 to 2500 mOsm/kg	0 to 2500 mOsm/kg	0 to 2500 mOsm/kg	0 to 2500 mOsm/kg
Product Competition	FreezePoint	FreezePoint	FreezePoint	FreezePoint
Differentiation (feature)	- no printer and no interface	- no printer and no interface	- no printer -interfaces: 1xUSB and 1x RS232	- no printer -interfaces: 1xUSB and 1x RS233
Regulatory/Regions	CE	CE	CE	CE
Manufactured	Germany	Germany	Germany	Germany
Lab Samples Recommended	1-10/day	1-10/day	1-10/day	1-10/day
Threat				
Technology Advancements				
Positioning				

Competition

International



Company	Löser Messtechnik	Löser Messtechnik	Marcel S.A. (Poland)	Labfreez Instruments (Hunan) Co., Ltd. (China)
PRODUCT NAME	iOsmometer M 10µl or 50µl	iOsmometer 50µ or 100µl	OSMOMETR Os3000	OSM2000 Freezing Point Osmometer
Image				
Performance Claims	0 to 2500 mOsm/kg	0 to 2500 mOsm/kg	0 to 2000 mOsm/kg	0 to 2000 mOsm/kg
Product Competition	FreezePoint	FreezePoint	FreezePoint	FreezePoint
Differentiation (feature)	-Built-in Printer - interfaces: 1xUSB and 2x RS232	-Built-in Printer - interfaces: 1xUSB and 2x RS233	none	
Regulatory/Regions	CE	CE	not mentioned	?
Manufactured	Germany	Germany	Poland	China
Lab Samples Recommended	1-10/day	1-10/day	1-10/day	1-10/day
Threat				
Technology Advancements				
Positioning				

Competition

International





Company	Löser Messtechnik	Löser Messtechnik	Marcel S.A. (Poland)	Labfreez Instruments (Hunan) Co., Ltd. (China)
PRODUCT NAME	iOsmometer M 10µl or 50µl	iOsmometer 50µ or 100µl	OSMOMETR Os3000	OSM2000 Freezing Point Osmometer
Image				
Performance Claims	0 to 2500 mOsm/kg	0 to 2500 mOsm/kg	0 to 2000 mOsm/kg	0 to 2000 mOsm/kg
Product Competition	FreezePoint	FreezePoint	FreezePoint	FreezePoint
Differentiation (feature)	-Built-in Printer - interfaces: 1xUSB and 2x RS232	-Built-in Printer - interfaces: 1xUSB and 2x RS233	none	
Regulatory/Regions	CE	CE	not mentioned	?
Manufactured	Germany	Germany	Poland	China
Lab Samples Recommended	1-10/day	1-10/day	1-10/day	1-10/day
Threat				
Technology Advancements				
Positioning				

Competition

International



Company	Suzhou Sujing Automation Instrument Equipment Co., Ltd (China)	Biobase Meihua Trading Co., Ltd. (China)
PRODUCT NAME	Full Automatic Freezing Point Osmometer	BKD-30SMC
Image		
Performance Claims	0 to 2000 mOsm/kg	0 to 3000 mOsm/kg
Product Competition	FreezePoint	FreezePoint
Differentiation (feature)	same like labfreez?!	
Regulatory/Regions	?	CE
Manufactured	China	China
Lab Samples Recommended	1-10/day	1-10/day
Threat		
Technology Advancements		
Positioning		

Value-Based Sales Model



PRICE

HIGH



LOW

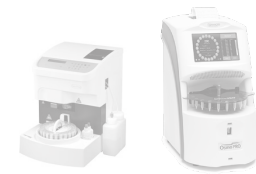


WEAK

MEDIUM

STRONG

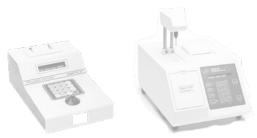
FEATURES



Advanced Instruments
OsmoPRO®, Arkay Osmo
Station
~\$40K



Advanced Instruments Osmo1®,
Löser Messtechnik
~\$25K



Advanced Instruments
3250 Single-Sample, Precision Systems OSMETTE
~\$20K



Gonotec® Osmomat®
~\$12,000



Precision Systems Touch
Micro OSMETTE® 30, Knauer K-7400S, Marcel Os3000, BIOBASE
~\$10K

What's in the Box?



What's in the box?

Gonotec® Osmomat® Freezing Point Osmometer

1. Osmomat® Osmometer
2. 300 Calibration Standard
3. 850 Calibration Standard
4. Measurement Vessels
5. Adjustment Tool
6. Fuses
7. Blow-out device
8. Ampule Breaker
9. Power and Data Cables
10. User's Manual

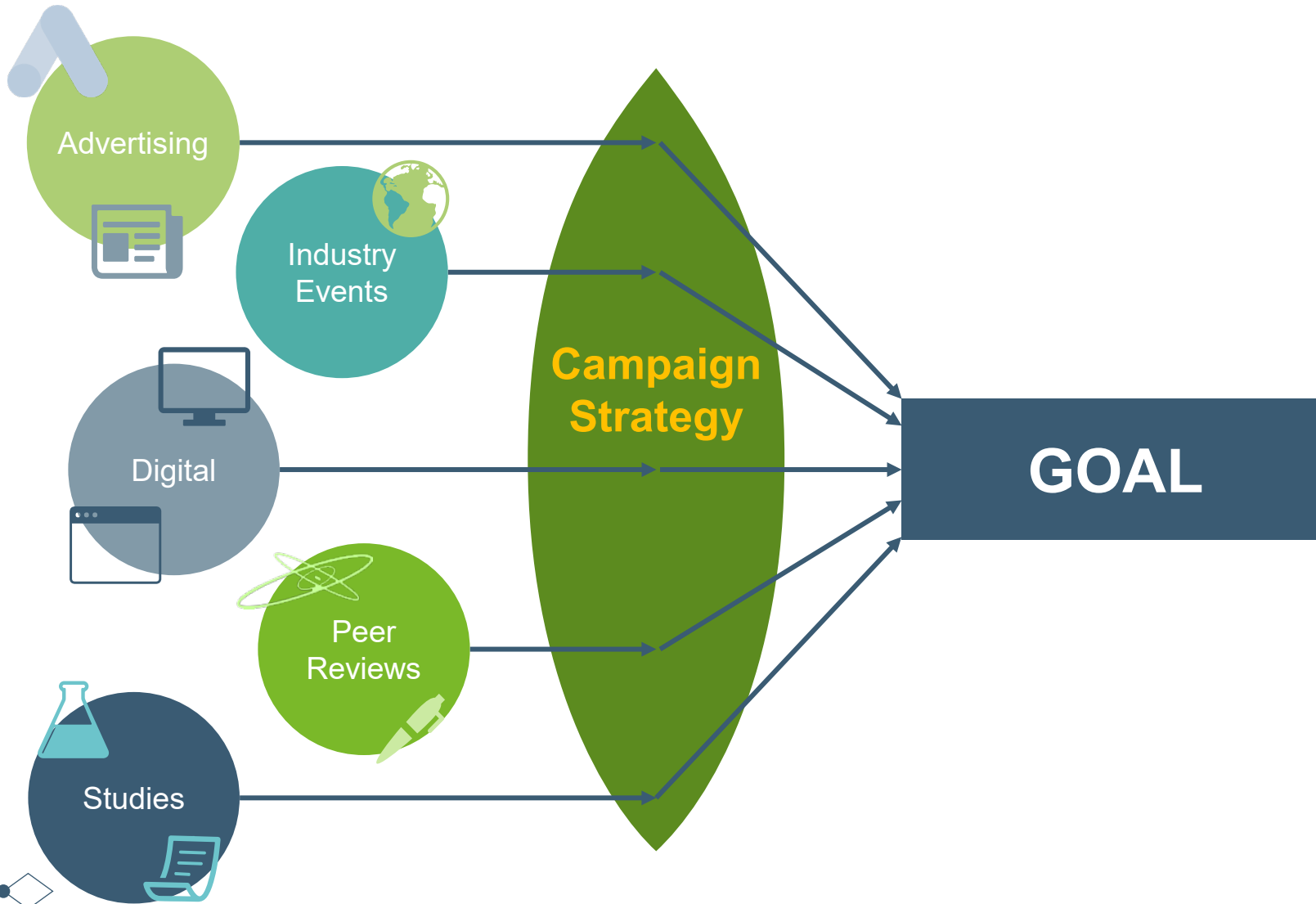


Marketing & Support



We are the Osmometer People

Influencing the perception of the market



**We are the
Number One Osmometer
Company in the World**





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Marketing Team

Enabling sales is priority



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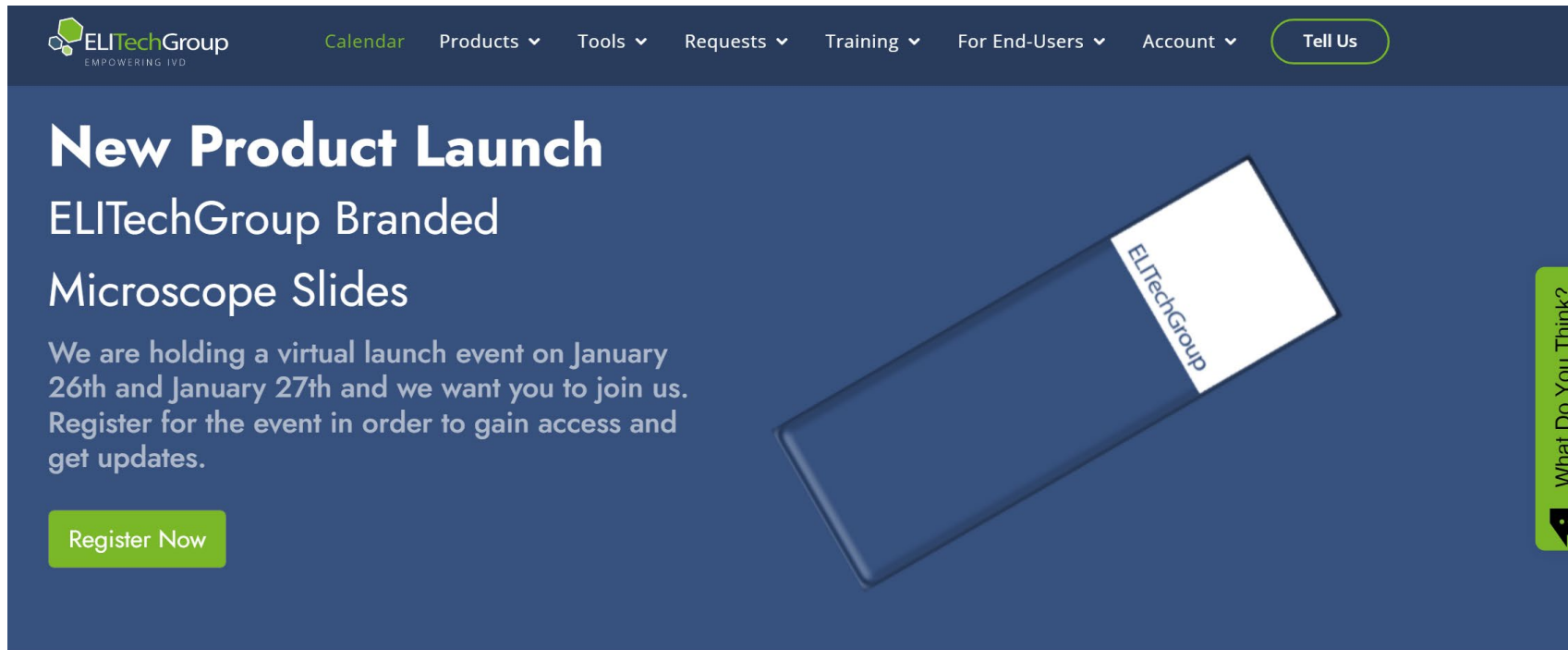
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Sales Roots

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The screenshot shows the ELITechGroup website with a dark blue header containing navigation links: Calendar, Products, Tools, Requests, Training, For End-Users, Account, and Tell Us. The main content area features a large blue banner for a "New Product Launch" of "ELITechGroup Branded Microscope Slides". The text on the banner reads: "We are holding a virtual launch event on January 26th and January 27th and we want you to join us. Register for the event in order to gain access and get updates." Below this text is a green "Register Now" button. To the right of the text is a 3D rendering of a microscope slide with the ELITechGroup logo. On the far right of the banner, there is a vertical green bar with the text "What Do You Think?" and a speech bubble icon.

Simple ChloroChek® Upkeep

A quick demo on keeping your ChloroChek in tip top shape
>
Arguably, one of the most important parts to any laboratory device is the



Kick Off the Year at Medlab Middle East!

Jan. 24 - Jan. 27

Service and Applications Support

Customer satisfaction is priority



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Manager

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Support Manager

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END.

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