

# SUPERIOR TOTAL NITROGEN | SULFUR ANALYSIS WITH ACCURACY, SPEED AND EASE-OF-USE



- Powerful TN/TS analysis within 4 minutes
- DSP Technology<sup>™</sup> to achieve ultra low detection limits
- AS120 Liquids autosampler with ONE-Cal<sup>™</sup> Technology
- Un-biased Sulfur data with TRINITY™ in TS an TN/TS mode operation



## MOST POWERFUL PERFORMANCE WITH UNSURPASSED DETECTION LEVELS

The EST Total Nitrogen/Sulfur Analyzer, model NEXIS VP, is the most sensitive and reliable vertical combustion analyzer available, to detect precisely, from ultra-trace to high ppm level, simultaneous total nitrogen/sulfur concentrations in a wide range of liquids and LPG/Gas samples. The NEXIS VP model TN/TS analyzer configuration detects these substances through a uniquely high effective NEX-Z<sup>™</sup> combustion tube design that includes high quality Ultra Violet Fluorescence (UVF) and Chemiluminescence (CLD) detectors.

Customers in refineries, petrochemical plants and commercial testing labs which require high productivity and precision at very low concentration levels will benefit from the NEXIS VP model combustion analyzer. The ease-of-use operation combined with reliability and variety of liquid sample handling, the NEXIS VP delivers fast, precise and accurate sulfur/nitrogen analysis data. The NEX-Z<sup>™</sup> Combustion tube in combination with the reliable temperature-controlled sample inlet port is suitable for the whole range of liquid hydrocarbon samples without the need of special catalyst or inlays. This makes the NEXIS the ultimate product solution for analysis needs, such as product quality monitoring and control of key refinery processes.







The NEXIS VP is designed to facilitate high sample throughput by the AS120 liquid autosampler through syringe introduction methods with optional heated and cooled sample trays. For Gas and LPG samples the NEXIS VP TN/TS analyzer can be connected to a NEXIS Gas Module (GM) module to facilitate the safe and automated sampling and analysis process for these type of samples with fast connectivity and ease of use operation through NEXIS LINK<sup>™</sup> software.

The NEXIS VP model analyzer meets stringent compliance to international ASTM, ISO, DIN, EN and UOP regulatory methods.

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#### **KEY ADVANTAGES**

- Accurate, Fast and Reliable Total Nitrogen/Sulfur Data
- Unique vertical furnace tube NEX-Z<sup>™</sup> design for effective combustion
- Use of DSP Technology<sup>™</sup> for ultra-trace level detection levels of total sulfur and nitrogen with superior LOD
- Regulatory compliance to international standards (ASTM, ISO, UOP, DIN)
- Simultaneous analysis of TN/TS with TRINITY™ module application for unbiased total sulfur data
- · AS120 Liquid autosampler with heated and cooled tray capabilities for high sample throughput
- Ease-of-Use and access to main analyzer parts for user maintenance

## **ELEVATE PRODUCTIVITY TO A NEXT LEVEL**

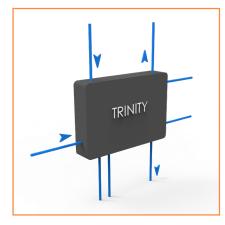
#### AS120: RELIABLE LIQUIDS XYZ-SAMPLER

The AS120 model autosampler can be configured in 3 versions to handle a large variety of liquid samples. The position of the sampler has no impact on laboratory bench space and has enhanced sampling capabilities with heated and cooled tray capabilities. The highly efficient unique designed cooled sample tray is very effective to handle volatile liquid samples. Even more the AS120 liquid sampler can use ONE-Cal<sup>™</sup> technology, to prepare out of 1 (stock)standard a customized calibration line automatically with high precision and accuracy.



#### **KEY ADVANTAGES**

- Time saving Automatic customized ONE-Cal<sup>™</sup> Single Source Calibration feature for liquids AS120 at NEXIS VP Compatible with syringes from 25 to 250 uL
- Faster sample run times through a Powerful temperature controlled cooled and heated sample tray design with sample temperatures down to 18°C within 1 minute for analysis of volatile liquid samples



#### TRINITY™: POWERFUL TUNABLE SOLUTION FOR REPORTING UNBIASED SULFUR DATA

In order to have interference free total sulfur analysis consistent with ASTM D5453-19a, EST has developed a unique software controlled and integrated customer solution in the NEXIS VP TS and TN/TS analyzer configurations.

The use of a novel and sophisticated NO<sub>X</sub> Elimination design, TRINITY<sup>™</sup> module, enables users to adjust the power level to save operational costs while achieving the most effective elimination of Nitrogen Oxide and finally reporting accurate and non-biased total sulfur data in their samples.



#### NEXIS GM: AUTOMATIC AND SAFE GAS/LPG SAMPLING

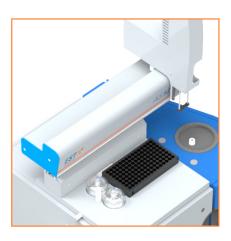
The NEXIS GM is available with built- in safety features to give your lab confidence. It is available in three different configurations and designed to handle pressurized LPG/Gasses and/or non-pressurized gas samples (e.g.Tedlar bags) in a single gas sampling device. The NEXIS GM module is software controlled and will load and inject a pressurized Gas / LPG sample through a sample loop design automatically into the NEXIS analyzer.

#### **KEY ADVANTAGES**

- Safe and easy to operate with a Calibration line based on only ONE single Gas/LPG or liquid standard
- Increased bench space with a Compact design with controlled NEXIS LINK software operation
- Operational peace of mind with Safety sensor to ensure safe sample handling







# NEXIS VP HAS YOUR LIQUID AND GAS/LPG APPLICATIONS COVERED

The NEXIS VP vertical combustion analyzer is available in 5 different analyzer configurations with no impact on the bench space. The analyzer is designed to run from ultra-trace to ultra-high-level analysis within a few minutes and meet an extended range of customers application requirements.



#### MARKET APPLICATIONS AT A GLANCE

Market Application	Total Sulfur	Total Nitrogen			
Fuels (Diesel, Gasoline, Kerosene)	٠				
Volatile Liquid Hydrocarbons	•	•			
Light and Heavy Liquid Hydrocarbons	•	•			
LPG & Gaseous Hydrocarbons	•	•			
Natural Gas	٠				
Condensates and Distillates	•	•			
Lubricating Oils		•			
VGO's		•			
Aromatic Hydrocarbons	•	•			
High grade chemicals	•	•			
Biodiesel	٠				
Ethanol	•				
Renewable liquids	•	•			
UCOME & Fatty Acids	•	•			
Additives		•			

	Heater status		0					
	Setpoint	Actual						
Furnace 1	1000	995	°C					
Furnace 2	1000	995	°C					
Inlet	500	495	°C					
NOx Converter	320	315	°C					
	Flow status		0					
Calibrate	Setpoint	Actual						
Argon/Helium	100	95	ml/min					
Oxygen (primairy)	300	295	ml/min					
Oxygen (turbo)	100	93	ml/min					
Oxygen (ozonator)	100	95	ml/min					
	PMT settings							
	Setpoint							
TN PMT	0		V					
TSUV PMT	700	700	v					
Tray settings								
	Setpoint	Actual						
Cooling		0	°C					

### NEXIS LINK SOFTWARE WITH DSP TECHNOLOGY™ : INTUITIVE FULL ANALYZER CONTROL WITH ULTRA LOW DETECTION LEVELS

The comprehensive and easy to use NEXIS LINK software supports the operation, full instrument and sampler parameters control and data handling of the NEXIS VP Combustion Elemental Analyzer. A user-friendly diagnostics and clear icons design allow simple analyzer operation at a glance.

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AR	ON	brogen @ Sultur	E Explusite Sample	Evaluate o	inin .					Area	Canc				
**	001 0	110	name type	alore	1111	conc c unit	mean	14	nd Metod A	32,245.76	\$25 mp/hp	3. 0			OK report
22	12	CER4 5 12 N 100	Gamelie	0.00	36,725.45	ILSE make			TAPS # HR7000.injedt	400	1				
22	12	CRM & 5.12 N 100	sample	0.00	26.295.75	11,25 malks			TAE'S E HR7000 Inject	432					
24	12	CEM # 510 N 100	LAMAGE	0.00	35,000.55	11.27 made			TATS, E. H87000, Input						
25	12	CRM & S10 N 100	sample	0.00	36,219,57	11.20 mp/kp			TAES & HR7000 Inject	400					
26	.12	CEM & \$10 M 100	cample.	0.00	16,218,21	11.20 make	11.26	0.07	0.59 TATS & HR7000 Inject	382					
27	13	CRM 8 5:10 N 200	sample	0.00	28,511.06	12.23 malka			TAES & HR7000 Inject						
28	12	CEM # 5 12 N 200	sample	6.00	25.551.79	12.24 maže			TRES. E. HE7000 Jeject						
29	12	CRM # 5 10 N 200	sample	0.00	21.540.06	12.24 mp/kg			TATS & HR7000 Inject	340					
30	11	CRM 8 S 10 N 200	CHARGE #	0.00	18451,29	12,25 make			TAT'S # INR7000 Invest	320-					
31	13	CKM 8 5 10 N 200	sample	0.00	35.671.00	12.28 mp/kp	12.34	0.05	0.21 TATS E HR7000 Inject	200	1// -				
32	24	CRM C 5 12 N 300	sample	0.00	42,610.09	13.22 mate			TAT'S & HR7000 Inled	200					
33	14	CEM C 5 10 M 300	sample	0.00	42,435.19	13.21 mp/kg			TAT'S, E. HE7000 Jepent						
54	54	CRM C 5:10 N 300	sample	0.00	42,405,82	13.14 mp/kp			TAY'S & HR7000 Inject	290					
35	14	CRM C \$10 N 300	sample	6.00	42,449.85	15.15 mpAg			TAT'S & HR7000 Inject	3,200					
26	24	COLUMN TO AND	Lample.	0.00	42,459,75	13.22 marks	12.10	0.04	0.28 TAT'S & HR7000 Inject	5 200					
37	15	CRM 0 5:10 N 500	sample	0.00	45,643.99	15.10 mp/kg			TATS, R. HR7000 (reject						
28	15	CEM D 5 10 N 500	sample	0.00	48.332.66	15.31 mp/kp			TAFS & HR7000 Inject	200					
39	15	CRM 0 5 10 N 500	sample	0.00	45,751.73	15.13 mp/kp			TAPS, E. HR7000 Jeject	180		(H)			
40	15	CRM D 5 10 N 500	sample	6.00	45.546.50	15.38 mp/kp			TATS E INR7000 Inject	162		18			
41	15	CRIM (0 \$10 N 500	campte	0.00	48,490.87	15.05 mp/kp	15.79	0.14	0.85 TATS E H87000 leged		1				
42	16	(RM ##1510NO	calibratio	m 10.00	32,166,29	9.93 mp/kg			TAPS & HR7000 Inject	140					
43	76	CRIMINAL STONO	catibratio	n 15.00	31,832.26	9.82 mp/kg			TATS_E_HR2000_inject	120	1				
44	76	CRM Ref \$10 NO	calibratio	n 10.00	32,016.38	9.05 mp/kg			TAES E HR7000 Inject	100	-				
45	16	CRM Rut S10 NO	albrida	n 15.00	12,137,72	9.92 mg/kg			TATS_E_HR7000_inpect	80	1				
46	16	CAN AN SASSIE	albyda		32,240.76	9.95 mp/kp	\$.90	0.05	0.51 TATS_E_HR7000_Hpert						
47	12	ASI NS:50	(alibratio	n 50.00	160,137.78	50.06 mg/kg			TAES & HR7000 Inject	60	1				
40	17	ASI N5:50	calibratio		158,579,17	43.55 mp/kg			TATS_E_H87000_leped	40	1				
49	17	ASI NS:50	calibratio		158,867,78	49.66 mp/kg			TAFS_E_HR7000_Inject	20		and the second			
50	17	ASI N5:50	-010-051		160,314.36	50.11 mp/kg			TATS, E, HR7000, Jepen	-			-	-	
51	17	ASI NS 50	albuta	in 55.00	161,210.05	50.38 mp/kp	50.02	0.27	0.55 TAES_E_HR7000_Inject	0 6	0 130 190	200 280	. 300	353 40	0 450
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#### **KEY ADVANTAGES**

• Real time measurement curves with peak overlays

System status Queue manager One-Cal Evaluate results Method Queue editor

- Export data to LIMS using common file formats such as XML, CSV, Tab, XLSX
- TRINITY™, AS120 liquids sampler and NEXIS GM Gas/LPG sampler operation and control
- Integrated calculation and calibration methods for analysis of Gas and Liquid samples
- Enhanced automatic ranging, calibration and analysis functionalities



# EST SOLUTIONS FOR COMBUSTION ELEMENTAL ANALYSIS

#### NEXIS CONFIGURATION AND ORDERING INFORMATION

Analysis	NEXIS VP	ltem No.	Voltage
Total Sulfur	•	CT1011001	115V
Total Nitrogen	•	CT1011002	115V
Total Sulfur / Nitrogen	•	CT1011003	115V

#### **ABOUT EST**

For over 30 years, EST has been manufacturing, selling, and servicing high quality ISO certified scientific and analytical instruments. We are privately held and have only one stock holder we are committed to, and that's our customers. Our solutions help our clients meet complex industry challenges by providing unparalleled quality instruments that deliver high performance, safe operation, and a low cost of ownership, all of which ensures the best overall value for laboratories around the world. Our headquarters are in Cincinnati, OH with locations in Rotterdam and Beijing.

At EST, the customer is boss, and that's why labs of all types have come to Rely On Us.

#### **CONTACT INFO**

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