FOSS

INFORME TÉCNICO JG-190.

Att: Anthony Greig Olmedo. Jefe de Laboratorio.

Ref: Informe de Servicio instrumento DS 2500. S/N 917 40801.

Fecha: 02 de Diciembre de 2016.

En servicio de asistencia realizado en las dependencias de PROMAIZ, se detalla:

Se reemplaza mantenimiento preventivo, se reemplaza Filtro de polvo compuesto P/N 6005 6569.

Se adjunta reporte de servicio y protocolo de mantenimiento preventivo realizados.

FossCare™

FOSS **Preventive Maintenance Protocol**

NIRS™ DS2500 / DS2500 F

PM interval: 12 months	No. of samples analysed: 2.324.
PM kit (P/N): N/A.	Date: 25-07-2016.

Introduction

A maintenance protocol provides a systematic and functional means of maintaining a specific instrument type. The certified performed PM interval depends on the operational conditions, and is based on our extensive experience and knowledge of manufacturing and maintaining analytical instruments.

Apart from sample throughput, the environmental conditions also need to be taken into account. Demanding environments, such as high ambient temperature, humidity, dirtiness etc can measurably shorten component lifetime and also the maintenance and component replacement intervals.

For information about part numbers and instructions please refer to the spare parts manual, the user manual and the service manual.

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Customer Support, 60847549 / Rev. B

Maintenance Procedure

Parts / Modules to be Replaced

For procedure, see User Manual

OK	Part / Module	Action	Qty	P/N
☐	Lamp	Replace the lamp	1	N/A
☒	Fan filter	Replace the fan filter.	1	6005 6569

Clean

For procedure, see Service Manual

OK	Action
☒	Clean the Instrument glass in the Sample Handling Unit with a 50/50 mix of alcohol and water. Inspect for scratches and cracks.
☒	Inspect all sample cups for scratches, cracks and loose glass. Instruct the customer on cleaning procedure if necessary.
☒	Unscrew the pump lid and clean the pump/fan compartment from dust inside, using a brush, vacuum cleaner or compressed air.

Check and Adjustment

For procedure, see Service Manual

OK	Action
☒	Check the cog wheels for wear and signs of brass dust.
☒	Check all internal water tubes so they are not kinked, dry or leaking.
☒	Check the level of the cooling liquid. Add if needed.
☒	Make sure the internal cooling fans are running. Check if any abnormal sound is present.
☒	Make sure the lid can close properly. Adjust if needed. Make sure the lid can open automatically. Make sure the lid opens smoothly.
☒	Make sure the ISIscan Nova software and MOSAIC Solo software (if applicable) are up to date. Make an upgrade according to Technical Note. If not: Comment:..... NB: Make a backup before you begin.
☒	Make sure that rear connectors are covered to protect the internal modules and assure that the instrument is IP65

Check with Foss Service Scan (FSS)

For procedure, see Service Manual

OK	Action
☒	Make sure the SHU can rotate the instrument glass smoothly.
☒	Make sure the reference plate moves smoothly and can reach both end positions correctly.
☒	Test all customers sample cups and make sure all RFID chips can be read properly.
☒	Make sure the optical cup sensor works as it should.
☒	Make sure the lid sensor works as it should, exercise the solenoid
☒	Measure the internal PCB temperature of the instrument. Temperature: 29,98 C° Comment:

Check with Instrument Diagnostic Report

For procedure, see Service Manual

OK	Action
☒	No. of samples analysed: 2324
☒	Check the Diagnostic report for PbS noise. Random limit = 200. Drift limit = 1. Noise Random: 97,309 Noise Drift: 0,0443 Comment:
☒	Check the Diagnostic report for Si noise. Random limit = 200. Drift limit = 1. Noise Random: 133,481 Noise Drift: 0,0830 Comment:
☒	Check the Diagnostic report for Wavelength accuracy. WL delta limit +/- 0.20 nm. WL StdDev limit 0.02 Max Delta: -0,056 Max StdDev: 0,002
☒	Check the Diagnostic report for Bandwidth accuracy. BW delta limit +/- 0.50 nm. BW StdDev limit 0.10 Max Delta: -0,02 Max StdDev: 0,002
☒	Check the Diagnostic report with regards to Reference plate motor speed. Limit low = ± 31 RPM. Limit High = ± 75 RPM. Value clockwise: 56,62 RPM Value counter clockwise: -56,62 RPM Comment:
☒	Check the Diagnostic report with regards to Cup motor speed. Limit low = ± 31 RPM. Limit High = ± 75 RPM. Value clockwise: 56,79 RPM Value counter clockwise: -56,79 RPM Comment:

OK	Action
☑	Check the Diagnostic report for Lamp status. Lamp voltage: 12,06 VDC Lamp current: 2,73 A Lamp house temperature: 36,25 C° Comment:
☑	Check the Diagnostic report for Grating motor status and compare to last year. Grating Speed: 20.001,67 Grating noise: 46,00 Comment:
☒	Check the Diagnostic report with regards to Detector temperature. Limits: 29.98 – 30.02 C° Temperature: 30 C°

Check with ISIscan Nova

For procedure, see Service Manual

OK	Action
☑	Make an Instrument Calibration with EWC and ERC to standardize the instrument. Don't forget to "Update the internal reference settings". NB: The instrument must be well warmed up before the calibration.
☑	Analyse the Check sample and compare with previous results by looking at the check sample history Comment:

Note: The total time is an approximate time and depending on e.g. the current status and the accessibility of the instrument this time might vary.

Total Time [Min]
120

Customer representative:	Signature:
FOSS representative:	Signature:

DILACO

REPORTE DE SERVIC

Nº 05526

Cliente	Promasa		
Planta	Isla de Maipo		
Equipo	DS2500		
Nº de Serie	917-40801	Fecha	25-07-2016
Técnico	José Quiñenao M.	Hora Llegada	
Contacto	Antony Greig.	Hora Salida	

Tipo de Servicio

Garantía ☐ Reparación ☐ Preventivo ☒

Asistencia ☐ Instalación ☐ Diagnostico ☐

Informe de Repuestos Utilizados

Nº de Parte	Cantidad	Descripción	Nº de Parte	Cantidad	Descripción
6005650?.	01	KIT.			

Observaciones

Equipo operativo.
Se realiza Mantenimiento Preventivo
Se reemplaza filtro para polvo
P/N 6004 0000.
Obs: Mucho polvo en el sector del Radiador y Ventilador para Liquido refrigerante.
Se recomienda Mejorar para evitar fallas a futuro.
Chequear con Muestras de referencia y Ajustar de ser Necesario.

Equipo Operativo

Finalización del Servicio

No se Finaliza ☐ Si se Finaliza ☒

Aprobación

Se recomienda realizar mantenimiento preventivo a PC del instrumento y a unidad respaldo de energía eléctrica (UPS).

Instrumento DS 2500 queda operativo y funcionando.

Les saluda atentamente.

José A. Gutiérrez M.

Servicio Técnico FOSS.
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