Minimize Downtime
with Condition-Based
Instrument Diagnostics

Agilent CrossLab
Smart Alerts software
Regular maintenance keeps instruments performing at their peak—and keeps costly downtime in check.
However…

Many variables can drive the need for more frequent maintenance than the manufacturer recommends.

High sample loads  Multiple shifts  Harsh operating conditions
Knowing which instruments are functioning well—and which need immediate attention—can be challenging.
The Solution: Condition-Based Instrument Diagnostics

Agilent CrossLab Connect Smart Alerts software:

- Monitors actual instrument use.
- Sends you timely recommendations based on extensive Agilent experience and instrument testing, so you know when to replace consumables or schedule preventive maintenance.
- Gives you a lab-wide view of instrument status. You immediately know which instruments are available and which need attention.
- Direct from Smart Alerts you can quickly inform Agilent when you need service.
For LC maintenance, we have tested these solvent compositions:

- Reverse phase—routine
- Reverse phase—buffer + organic
- Reverse phase—high salt
- Normal phase
For GC and GC/MS maintenance, we have performed long-term testing with multiple samples in these application areas:

- Environmental
- Food safety
- Forensic
- Energy
- Pharmaceutical
You Decide What to Do Next

**Consumables**
Replace them as you normally do.

**Preventive maintenance**
If you have an Agilent service agreement that includes preventive maintenance, call Agilent to schedule your service.
If not, consider purchasing on-demand preventive maintenance from Agilent.

**Instrument fault alerts**
Solve instrument problems more quickly.
When a service call is needed, Remote Assist makes it fast and easy.
So, How Does It Work?
Smart Alerts: Easy as 1, 2, 3

1. Install the software on any PC in your lab in 10 minutes or less
No Internet connection required

2. The software compares instrument-use data against application-based insights from Agilent (customizable)

3. Receive an email when recommended limits are reached
Smart Alerts Dashboard
Early maintenance feedback settings

Set preventive maintenance alerts:
- Use default
- Adjust based on experience
Smart Alerts Dashboard
Early maintenance feedback settings

Choose from a wide range of consumable alerts

<table>
<thead>
<tr>
<th>Enabled</th>
<th>Active</th>
<th>Consumable</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td></td>
<td>Separation</td>
<td>Front Inlet</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Linear</td>
<td>Front Inlet</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Split Vent Trap</td>
<td>Front Inlet</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td></td>
<td>Back Inlet</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Rotor</td>
<td>Valve 1</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Septum</td>
<td>Valve 1</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Column</td>
<td>Column 1</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>FID Clean Collector</td>
<td>Front Detector</td>
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<tr>
<td>+</td>
<td></td>
<td>FID Jet</td>
<td>Front Detector</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>FID Ignitor</td>
<td>Front Detector</td>
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<tr>
<td>+</td>
<td></td>
<td>NPD Detector Brass</td>
<td>Basic Detector</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Gas Filter</td>
<td>Instrument</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enabled</th>
<th>Active</th>
<th>Consumable</th>
<th>Reset Counter</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td></td>
<td>Backflush Inline Filters if installed</td>
<td>Reset</td>
<td>Pump</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Solvent Filter(s)</td>
<td>Reset</td>
<td>Pump</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Pump Inline Filters if installed</td>
<td>Reset</td>
<td>Pump</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Needle Seat</td>
<td>Reset</td>
<td>ALS</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>UV Lamp</td>
<td></td>
<td>UV based detector</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Check/Replace Left Column</td>
<td></td>
<td>Column</td>
</tr>
<tr>
<td>+</td>
<td></td>
<td>Check/Replace Right Column</td>
<td></td>
<td>Column</td>
</tr>
</tbody>
</table>
Choose between usage- and calendar-based alerts

Smart Alerts Dashboard
Early maintenance feedback settings
Smart Alerts Dashboard
Early maintenance feedback settings

Agilent insights:
- Templates based on Agilent instrument/application knowledge
- Customize to suit your needs
Smart Alerts Emails
Consolidate data from all connected instruments

Receive alerts for:

• Preventive maintenance
• Consumable replacement
• “Past due” and “upcoming” actions
• Instrument faults
Smart Alerts Emails
Consolidate data from all connected instruments

Links make it easy to:

- Order parts
- Request preventive maintenance service

To order Agilent parts, go to: https://www.chem.agilent.com/store.
To schedule a preventative maintenance, or other service, go here.

Order consumables here

Request PM service here
**Smart Alerts Emails**

Consolidate data from all connected instruments

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**Summary of all active alerts across your lab**

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<table>
<thead>
<tr>
<th>System Name</th>
<th>Maintenance Past Due</th>
<th>Upcoming Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>7890a</td>
<td></td>
<td>PM</td>
</tr>
<tr>
<td>WAD LC</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
# Smart Alerts Emails

Consolidate data from all connected instruments

![Smart Alerts Email Example](image)

**Details grouped by instrument in a single email**

### WAD LC

**System Type:** LC System

- **Model:** 1290 Ovital Pump
  - Model: G4204A
  - S/N: PR3AT00096
- **Model:** 1290 Sampler
  - Model: G4226A
  - S/N: LP0055916
- **Model:** 1290 TCC
  - Model: G1319C
  - S/N: DE04555246
- **Model:** 1290 NCT
  - Model: G7196B
  - S/N: PP1005008
- **Model:** DMD-IL
  - Model: G1319C
  - S/N: PR00000001
- **Model:** 1290 Instant Pilot
  - Model: G4209A
  - S/N: CE00997504

**Preventive Maintenance**

- **Last performed on:** 28-Feb-2020
- **Next PM due on:** 28-Feb-2021 (in 11 days)
- **PM schedule:** At least every 12 months

**Check/Replace Left Column**

- **Model:** G1319C
  - S/N: DE04555246

**Column**

- **Model:** G1319C
  - S/N: DE04555246

**Request PM service here**

**Last performed on:** 27-Feb-2020

**Next Replacement due by:** 27-Feb-2021 (in 16 days)

**Replacement schedule:** Every 12 months

**Order consumables here**

![Add ALL favorite parts for system WAD LC to Agilent cart](image)
Current Smart Alerts functionality:

- Fault Alerts
- Remote Assist
- Parts Management and Consumables Integration
- System Summary Report
- Desktop Notifications
- Database Migration
- Dashboard Update

Dashboard with real-time instrument status updates
Instrument Fault Alerts

Diagnose downtime and fix the problem faster.
Instrument Fault Alerts (Dashboard view)

- Notify you when your system goes down and tell you why.
- Help you save time and get your instrument running again quickly—with or without a service call.
Remote Assist

System Fault Details: WAD LC

<table>
<thead>
<tr>
<th>Module</th>
<th>Code</th>
<th>Description</th>
<th>Occurrence Time</th>
<th>Resolved Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>91315C-PW30000001</td>
<td>7400</td>
<td>No UV lamp current</td>
<td>25-Nov-2020 07:51:10 PM</td>
<td>Show all</td>
</tr>
</tbody>
</table>

Pre-populated with accurate system configuration information.

Request a callback option.

Pre-populated with accurate real-time instrument error information. End-user editable.

Direct to local Agilent call center.
Parts Management and Consumables Integration

Record individual system favorite consumable/part #’s...
Parts Management and Consumables Integration

Record individual system favorite consumable/part #'s...
Parts Management and Consumables Integration continued...

Easily manage / maintain laboratory wide “Master Parts” list...
Parts Management and Consumables Integration continued...

Capability to order Consumables” directly in Smart Alerts UI

Export Parts:
  • Instrument Specific and/or
  • Whole Lab Lists
Directly from Smart Alerts to Agilent.com, for registered internet connected customers, into prepopulated Ready-To-Use checkout carts.
Parts Management and Consumables Integration continued…

Via .csv file – for upload to Agilent.com Order Center Bulk Upload facility - for SAP registered non internet connected customers.
Additional functionality embedded in maintenance & fault email alert notifications

To order Agilent parts, go to: https://www.chem.agilent.com/store.
To schedule a preventative maintenance, or other service, go here.

Export parts directly to A.com
Desktop Notifications
Fault + Maintenance Alerts direct to end-user

Fault Alert:
Consumable Alert:
Upcoming PM Warning:

EMF over limit – ‘Dismiss All’ option:
Consumable warning – Snooze time’s and ‘Snooze All’ options:

March 25, 2021
What Does the Future Look Like?
Here’s what we support NOW…

Agilent 7890 A/B GC and SQ GC/MS systems
Agilent Intuvo 9000 GC and SQ GC/MS systems
Agilent 8860 GC and SQ GC/MS systems
Agilent 8890 GC and SQ GC/MS systems
Agilent Infinity and Infinity II 1260 LC systems
Agilent Infinity and Infinity II 1290 LC systems
Agilent ICP-OES 5100, 5110, 5800, 5900 systems
Here’s what we plan to support in the FUTURE…

- Atomic Spectroscopy
  - ICP-MS
- User Interface Enhancements
  - License Management
  - Request / Re-schedule a PM
  - Dashboard Customization / Filtering
- LCMS
  - SQ, TQ and TOF
- Infinity Bioinert LC
- Next Gen. Headspace
- Mobile Friendly Smart Alerts
- GCMS QQQ
- Parts Management Enhancements
- Remote Assist Enhancements
- and much more….
Agilent CrossLab
From Insight to Outcome