

# Full-Spectrum Bio LC

## Press Launch

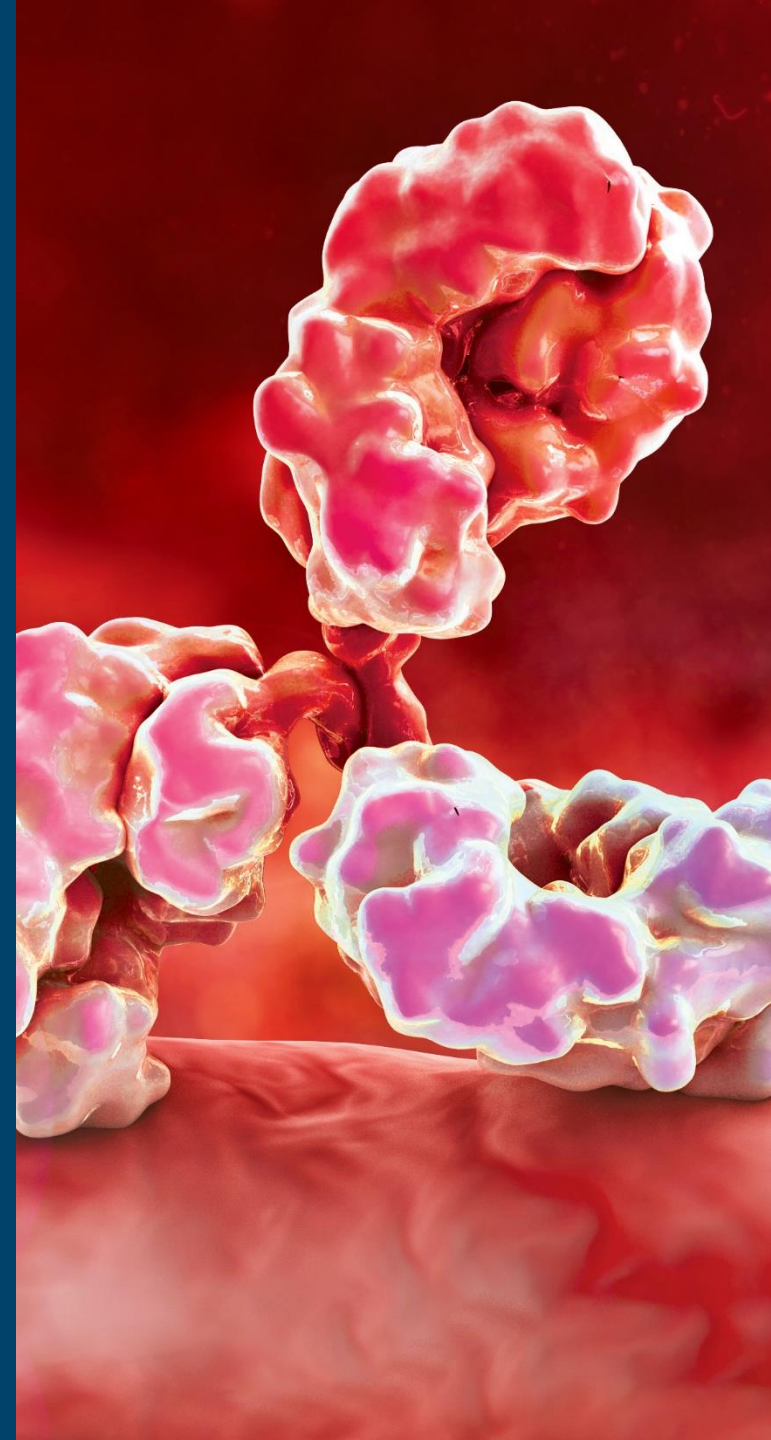


# The InfinityLab Bio LC Portfolio

Span the Spectrum of Bio LC

Dr. Stefan Schuette  
Vice President & General Manager  
Liquid Phase Separations Division

June 21, 2021



Agilent  
InfinityLab



# The New InfinityLab Bio LC

## It Is Your Bio Solution

"Great performance, improves work efficiency"

"Especially good for CQA in biopharma"

*Select Science Review, Tingting Zhang, SGS*



"Top choice, great results!"

"This system is the premium choice and yields excellent results."

*Select Science Review, Christina Jurawan, Analogic Solutions*



"I'd buy it again."

"I haven't used a lot of the 1290 Bio yet, but I've confirmed that it gives the same results as the general 1290. I'll have to try using it more, but I think it performs better for robustness and convenience in bio applications so far. It can be connected with the existing ECM server, so there is no difficulty in using it"

*Select Science Review, Dong Hun Cho, ST Pharm Solutions*



# The New Infinity Lab Bio LC

It Is Your Bio Solution



**Genentech**  
*A Member of the Roche Group*



Justin Jeong  
Principal Research Associate  
Genentech



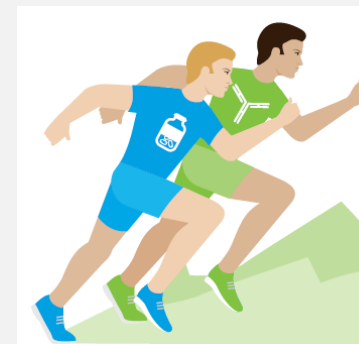
1290 Infinity II Bio LC

# Why the New Bio LC Hits the Perfect Spot Now



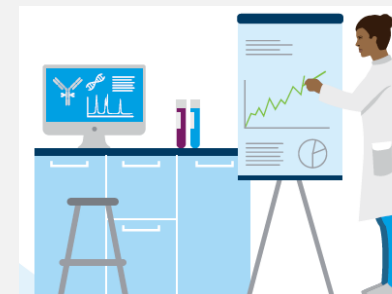
## Markets/ Customers

- Biopharma market grows significantly **faster** than small molecule pharma market.
- Traditional pharmaceutical companies move **investments** towards biopharmaceutical therapeutics.
- Measuring critical quality attributes (CQAs) of biopharmaceutical molecules require **harsh** analytical conditions.



## Trends

- Rise in investment in **R&D** for both mAbs and fast-growing Oligo Tx, Cell & Gene Tx and mRNA vaccines, also driven by **Covid-19** vaccines.
- Increased investment in **New Biological Entities & Biosimilars**
- Rising demands of **regulators** and country-related quality standards.



## Customer Drivers

- Reducing **operating costs** (e.g. real-time release testing)
- Faster time to market & improved operational agility: Collaborations & outsourcing to CRO/CDMO require **universal instrumentation** and seamless method transfer.
- High-volume **manufacturing capabilities** to deliver affordable high demand drugs (insulin, vaccines)

## Manufacturing expense



# 1260 and 1290 Infinity II Bio LC Portfolio

Today

## 1260 Infinity II **Bio-inert** LC System



For completely (bio-)inert applications

600 BAR	4 Quaternary	BUFFER ADVISOR
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## 1290 Infinity II **Bio** LC – High-Speed Pump



For ultra-high performance in complex sample analysis

1300 BAR	2 BINARY	ISET
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NEW\*

\*) since end of 2020 on corporate price list but now being fully publicly announced.

Completing the  
InfinityLab  
**Bio** LC  
Portfolio

NEW

## 1260 Infinity II Prime **Bio** LC



For everyday analysis with very high method flexibility

800 BAR	4 Quaternary	BLEND ASSIST	ISET	BUFFER ADVISOR
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NEW

## 1290 Infinity II **Bio** LC – Flexible Pump



For ultra-high performance, and highest method flexibility

1300 BAR	4 Quaternary	BLEND ASSIST	ISET	BUFFER ADVISOR
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# Application areas of the new InfinityLab Bio LC

As a universal System not only for Biopharma



## Critical Quality Attributes (CQA):

- Aggregates
- Charge Variants
- Peptide Mapping
- Drug-to-Antibody Ratio – DAR
- Intact Proteins, PTMs
- Host Cell Proteins – HCP
- ...and more



## Other – non-Biopharma:

- Oligonucleotides
- Compounds chelating with metal
- Phosphorylated compounds
- Handling of challenging solvents: high salt concentrations, low/high pH conditions
- Any small molecule application – new and legacy

# Bioinert and Biocompatible

## The **Necessity** of Bio Instrumentation

### BIO

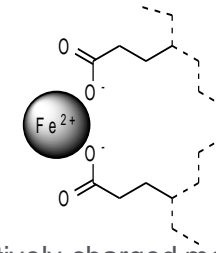
The materials in the sample flow path do **not** contain **any iron**, **only** very **noble materials**

### BIO INERT

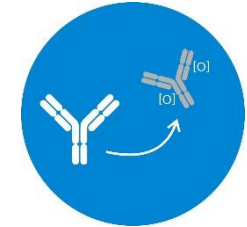
The materials in the sample flow path do **not** contain **any metals**

### Why is it necessary

- **Behavior of some biomolecules:**
  - Chelation – interaction of the biomolecule with iron
  - Oxidation
- **Harsh application conditions typical for bio applications**
  - High salt concentration
  - High or low pH → *“avoid rusty instruments”*
- **Another effect: Photo degradation** (high light intensity) – or *“frying eggs”*,  
Agilent’s solution: the “Max Light Cartridge **LSS** DAD flow cell” with a neutral grey filter!



Positively charged metal ions can attract negatively charged biomolecules through **chelation**



Iron can also cause **oxidation** of some proteins



# ...and so Many Bio Possibilities

## Bio 2D-LC Solution

Max out the information about your sample by applying software supported **multiple heartcutting** and **comprehensive 2D-LC**.  
Now also in a **compliant** way via OpenLab CDS.

## Bio Online LC

Your LC as an **analyzer** for your **bioprocess**. Enable online process monitoring and comply with PAT requirements.

## Bio Method Development

Automated **software supported** method development with up to **32 columns** and **24 solvents**.  
Up to **1300 bar** as bio-compatible system.

## Bio-SEC Solution

Separation by size in a complete **bio-inert LC**; here we go.

## Bio LC-QTOF

Go the **MS** way. All level of information for CQA and **metabolomics**.

Or, even as a **Bio 2D-LC MS Solution** fully controlled under **MassHunter?**

## Bio Purification

For further analyze, **purify** your **analyte of choice** in your sample.

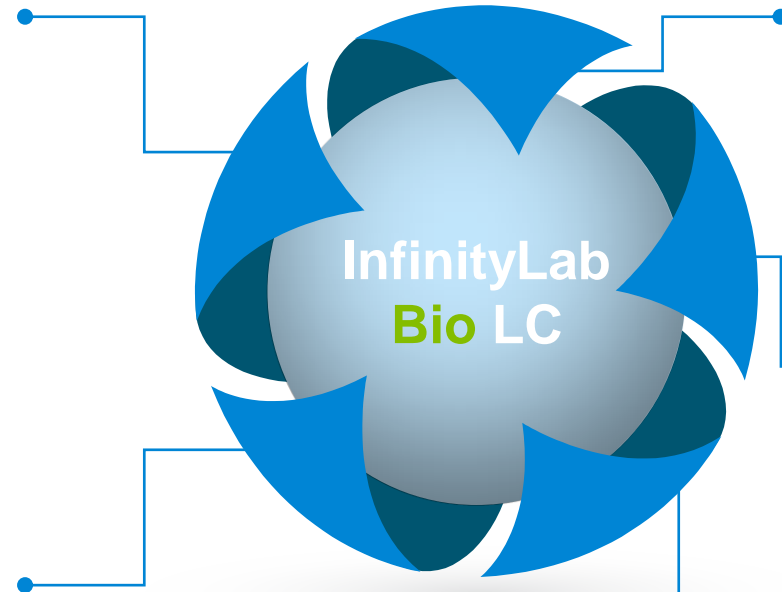


# Get the Most Out of Your Solution

Agilent **AdvanceBio** LC columns



Agilent LC/MS Portfolio and automation capabilities



Agilent OpenLab CDS  
Agilent MassHunter SW  
3<sup>rd</sup> Party CDS (via ICF)

Agilent  
OpenLab

Agilent CrossLab Services

Agilent  
CrossLab

Agilent supplies, kits, reagents, like **new** ProteinA-SEC 2D-LC Kit.



# InfinityLab Bio LC Portfolio - Summary



- Broadest Bio LC Portfolio, based on proven Technology
- Highest Flexibility to adapt to customer's needs
- Future Proof

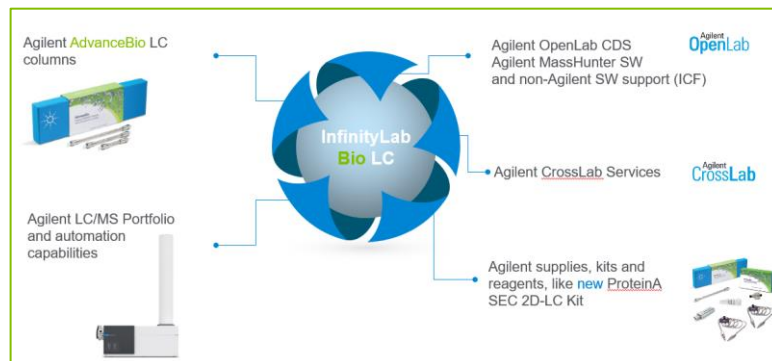
## BIO

The materials in the sample flow path do **not** contain **any iron**, **only** very **noble materials**

## BIO INERT

The materials in the sample flow path do **not** contain **any metals**

- Integrity of biomolecules and minimize unwanted surface interaction
- Corrosion-resistant, robustness for increased instrument uptime



- All you need – complete offering!

# Full-Spectrum Bio LC

The InfinityLab Bio LC Portfolio & Associated Solutions

