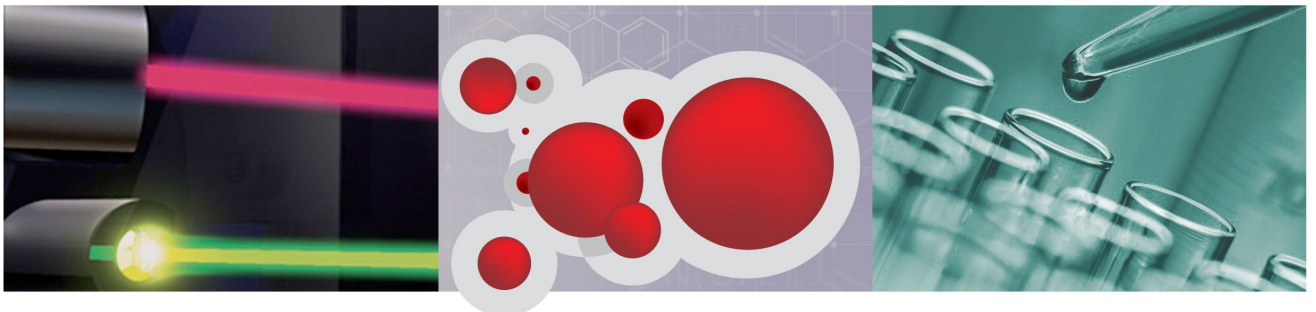


***Luminex***<sup>®</sup>

# Luminex<sup>®</sup> Salmonella Analysis Tool

User Instructions



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LUMINEX CORPORATION

12212 Technology Boulevard

Austin, Texas 78727-6115

U.S.A.

Voice: (512) 219-8020

Fax: (512) 219-5195

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# Salmonella Analysis Tool User Instructions

## Purpose

The *Salmonella* Analysis Tool is intended as an aid for analysis of data generated with the Luminex® xMAP® Salmonella Serotyping Assay. The analysis produced by this application is used to determine the possible *Salmonella* serotypes based on the Kauffman-White algorithm for *Salmonella* serotyping and user input of positive antigen/probe data.

**NOTE:** This application is for research use only. Performance characteristics have not been evaluated. User is responsible for establishing the validity and accuracy of this application. Refer to the official Kauffman-White-Le Minor scheme available from the Pasteur Institute at: <http://www.pasteur.fr/ip/portal/action/WebdriveActionEvent/oid/01s-000036-089>

## Requirements

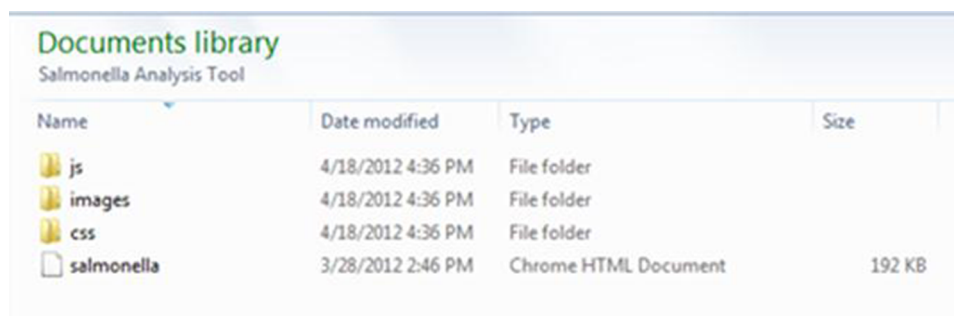
Ensure that Mozilla® Firefox® or Google Chrome™ web browsers are installed on the computer that will be used to launch the analysis.

**NOTE:** The application is not compatible with Microsoft® Internet Explorer®.

## Application Installation

1. Obtain the Salmonella Analysis Tool .zip file from Technical Support.
2. Extract and save all files, ensuring to keep all files within the same source folder.
3. Double-click the **salmonella** HTML document to launch the application.

**NOTE:** If Internet Explorer is installed on the computer as the default browser, right-click on the application folder, select **Open with**, then select either **Firefox** or **Chrome**.



The screenshot shows a Windows 'Documents library' window titled 'Salmonella Analysis Tool'. It displays a table of files and folders:

Name	Date modified	Type	Size
js	4/18/2012 4:36 PM	File folder	
images	4/18/2012 4:36 PM	File folder	
css	4/18/2012 4:36 PM	File folder	
salmonella	3/28/2012 2:46 PM	Chrome HTML Document	192 KB

# Application Overview

*xMAP® Salmonella Serotyping Assay™*

O Group (alphabetic) | H Phase 1 | H Phase 2 | Serotype

1 2 3 4

Search: 5

Obsolete name	Variant	Antigenic Formula	Ssp	O Group	O Group (alphabetic)	O Antigen	H Phase 1	H Phase 2	Serotype	Other Phases
Gwaai		21:z4,z24:-	II	21	L	21	z4,z24	-	II 21:z4,z24:-	
Fremantle		42:g,t:-	II	42	T	42	g,t	-	II 42:g,t:-	
Foulpointe		38:g,t:-	II	38	P	38	g,t	-	II 38:g,t:-	
Flint		50:z4,z23:-	IV	50	Z	50	z4,z23	-	IV 50:z4,z23:-	
Erlangen		48:g,m,t:-	II	48	Y	48	g,m,t	-	II 48:g,m,t:-	
Drypool		3,10[15][15,34]g,m,s:-	I	3,10	E1	3,10[15][15,34]	g,m,s	-	Amsterdam	
Drypool	O ag	3,15g,m,s:-	I	3,10	E1	3,15	g,m,s	-	Amsterdam var. 15+	
Congo		[1],13,23:g,m,[s],[t]:-	I	13	G	[1],13,23	g,m,[s],[t]	-	Agbeni	
Chameleon		16:z4,z32:-	IV	16	I	16	z4,z32	-	IV 16:z4,z32:-	
Canoga	O ag	3,15,34:g,s,t:-	I	3,10	E1	3,15,34	g,s,t	-	Westhampton var. 15+, 34+	

Showing 31 to 40 of 424 entries (filtered from 2,569 total entries)

First Previous 2 3 4 5 6 Next Last

5

The Salmonella Analysis Tool displays three drop-down boxes for selection of O group antigens (1) and Phase 1 and 2 of H antigens (2). A fourth drop-down box allows you to select a specific *Salmonella* serotype (3).

A Search box is also available as an alternative for data input (4).

Upon initial launch of the application, all possible *Salmonella* serotypes per Kauffman-White scheme are displayed by default. The list displays 10 entries at a time. View subsequent entries by paging through the application using the bottom right paging buttons (5).

The displayed output includes the following columns of information: Obsolete name, Variant, Antigenic Formula, Ssp (subspecies), O Group, O Group (alphabetic), O Antigen, H Phase 1, H Phase 2, Serotype, Other Phases. To sort the order of output data, click on the up/down arrows to the right of the column headers.

## Data Analysis

1. Select the applicable O Group antigen(s) from the drop-down box. The analysis automatically analyzes the data and only displays the serotypes associated with the selected O antigen(s).



2. Select the applicable phase 1 and 2 antigens from the H Group drop-down boxes. The analysis tool further analyzes the data and only displays the serotypes associated with the selected H antigens in addition to the previously selected O Group antigen(s). The selected antigens for O and H display in blue below the drop-down boxes.



*xMAP® Salmonella Serotyping Assay™*

O Group (alphabetic) ▾ H Phase 1 ▾ H Phase 2 ▾ Serotype ▾

**C1**      **g,m,s,t**      **1,6**  
e,n,z15

Obsolete name	Variant	Antigenic Formula
		6,7:e,n,z15:1,6

Showing 1 to 1 of 1 entries (filtered from 2,569 total entries)

3. To deselect an antigen, hover over the entry with the mouse. An “X” displays next to the entry and the font changes to red. Click on the “X” to deselect the antigen. The application automatically re-analyzes to exclude serotypes based on changes.



*xMAP® Salmonella Serotyping Assay™*

O Group (alphabetic) ▾ H Phase 1 ▾ H Phase 2 ▾ Serotype ▾

**C1**      ~~**g,m,s,t**~~      **1,6**  
e,n,z15

Obsolete name	Variant	Antigenic Formula
		6,7:e,n,z15:1,6

Showing 1 to 1 of 1 entries (filtered from 2,569 total entries)

4. The absence of H Phase 2 antigen results may be denoted by selecting the dash (-) from the Phase 2 drop-down box.
5. To exit the application, close out the Internet browser.

## Serotype Output

Antigen data obtained from the Luminex® xMAP® Salmonella Serotype Assay produces a complete serotype for 85% of the top 100 most common serotypes. Partial serotype information is produced for the remaining serotypes.

## Analyzing Partial Serotypes

For samples that do not produce a positive result for the O Group antigens covered by the assay, select all of the O Groups from the drop-down box except for those covered by the

assay. Use the same approach to narrow down the serotype output for samples that do not produce a positive antigen result for the H Group targets covered by the assay.

Some serotypes contain antigens that are not included in the current Luminex® xMAP® Salmonella Serotyping Assay. If partial information is obtained from the assay for these serotypes, the Analysis Tool can be used to produce a list of potential serotypes, which reduces the number of other tests needed to generate a complete serotype identity. Use the drop-down boxes as described above to select any antigens that were detected to generate a partial list.