

# The eLEXNET Data Exchange (DX) Program

The most efficient and accurate way for labs to share data with the food safety community.



---

## AT A GLANCE

---

- Background
- What is the Data Exchange (DX) Program?
- Who is Participating?
- What Data Can Labs Share with eLEXNET?
- How Does it Work?
- Steps to be Integrated?

---

### eLEXNET Help Desk:

**email:** [ellexnet\\_help@gnsi.com](mailto:ellexnet_help@gnsi.com) or  
**tel:** (301) 770-4012

---

## Background

As part of the FDA Food Safety Modernization Act, signed by President Obama this year, FDA's approach to food-borne illness is shifting from post-outbreak reaction, to early detection and prevention of contamination. As part of this new effort eLEXNET becomes the central food testing repository that will allow for the sharing of food testing data among various government agencies in a timely manner. This effort will provide a key tool in early detection of food related outbreaks.

The role of eLEXNET in meeting this government goal is through efficient and accurate accumulation of data from labs in a timely manner. The timely or near real-time transfer of data supported by the Data Exchange program reduces the crucial time from sample collection to result publication.

The eLEXNET team created the Data Exchange program to simplify the transfer of data from the lab's database to eLEXNET, via specific client software that is installed on the lab's computer. In addition to the benefits of being an active eLEXNET food safety lab, the client software provides the following advantages:

- **Accurate data:** The data exchange client extracts data from laboratory LIMS, or a designated spreadsheet, and performs some basic verifications before being transferred to eLEXNET. Automating data entries prevents against manually-entered errors.
- **Timely transfer:** The automated Data Exchange task can be scheduled on an ongoing basis, ensuring immediate transfer of critical data to eLEXNET. During a potential outbreak this could help save crucial time.
- **Standardizing data:** By performing a one time mapping of lab data to FDA standard codes we will ensure that all data in eLEXNET is standardized, consistent, and therefore has the integrity to provide value to the food safety community.



The eLEXNET Data Exchange (DX) program has been installed at multiple state and federal laboratories and receives an average of 2000 tests daily.

---

## The Power of eLEXNET!

---

eLEXNET is capable of capturing food safety samples and analysis data, and captures over 100 different data fields.

---

### eLEXNET Help Desk:

**email:** [ellexnet\\_help@gnsi.com](mailto:ellexnet_help@gnsi.com) or  
**tel:** (301) 770-4012

---

## What is the Data Exchange (DX) Program?

Data Exchange (DX) is a fully automated mechanism that allows labs to push data to eLEXNET seamlessly without human intervention. This process utilizes custom software developed by the eLEXNET Team that allows for the transfer of laboratory data into the eLEXNET repository at regular intervals. The eLEXNET Team builds the custom tool, requiring minimal time and effort from the participating lab.

## Who is Participating?

A large number of federal, state, local, regional, military, and university food testing labs are sharing data daily with eLEXNET through the Data Exchange program. eLEXNET is continuously expanding its network by integrating newer labs. All food testing labs, regardless of their test volume, can participate in this program.

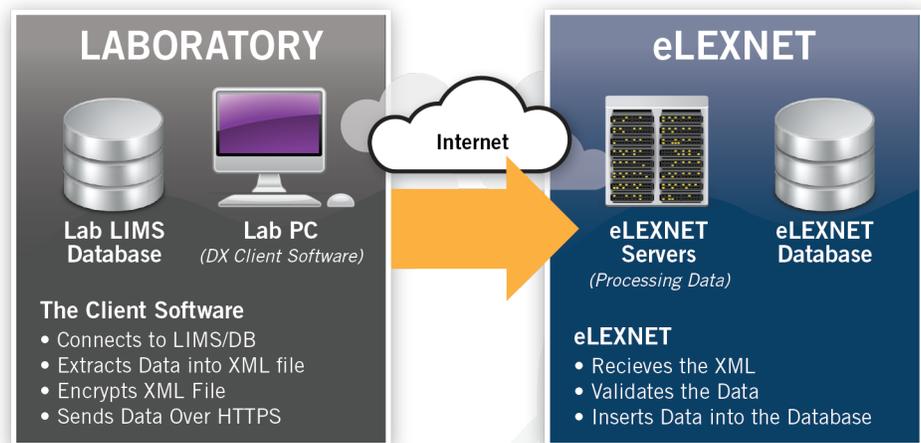
## What Data Can Labs Share with eLEXNET?

Through the Data Exchange program, eLEXNET is capable of capturing food safety samples and analysis data on most analytes including microbiological analytes, parasites, chemical analytes, and Radionuclide Mycotoxins. All verifiably and scientifically valuable food testing data is captured in eLEXNET. Proprietary information such as grower name or manufacturer address is not captured in eLEXNET.

For each food test eLEXNET is capable of capturing over 100 different data fields; however only 20 fields are mandatory, including Lab name, unique sample ID, product name, collection date and location, analyte, and test results.

## How Does it Work?

At a high level, the eLEXNET Data Exchange (DX) software extracts food testing data from the laboratory data repository (i.e. LIMS, Database, Spreadsheet), encrypts the information, and transfers it to eLEXNET over a secure network. eLEXNET validates the fields, stores the data, and then makes the information available to all users via the eLEXNET reporting tool.



All data extracted from the laboratory repository is encrypted and then transferred to eLEXNET via a secure HTTPS protocol. eLEXNET database servers are kept behind firewalls on a secured network to prevent intrusion.

eLEXNET is capable of importing data from any LIMS, database, or spreadsheet. eLEXNET supports all types of databases including Oracle, SQL Server, MySQL, and MS Access, as well as Excel, CSV, or formatted text files.

---

## Tasks

---

1. Express Interest In DX Program
  2. Kickoff & Planning
  3. Provide Sample Data
  4. Map Lab Data Fields to Standard eLEXNET Data Fields
  5. Map Reference Values
  6. Develop & Test Software
  7. Install/Configure Software
  8. User Acceptance Testing
- 

### eLEXNET Help Desk:

**email:** [ellexnet\\_help@gnsi.com](mailto:ellexnet_help@gnsi.com) or

**tel:** (301) 770-4012

---

## What are the Steps Needed for My Lab to Participate?

The integration process involves close coordination between the lab and the eLEXNET Team. The following table summarizes the steps taken by each team.

Task	eLEXNET Team	Lab Team
1. Express Interest In DX Program		●
2. Kickoff & Planning	●	●
3. Provide sample data		●
4. Map lab data fields to standard eLEXNET data fields	●	
5. Map reference values (Product code etc.)	●	
6. Develop & test software	●	
7. Install/Configure software	●	●
8. User Acceptance Testing	●	●

1. **Express Interest in the DX Program:** Contact the eLEXNET Help Desk to begin the process.
2. **Kickoff & Planning:** The integration process starts with a kick-off meeting attended by the lab's decision makers as well as IT experts. The stakeholders agree on the terms and schedule for software development and testing.
3. **Provide sample data:** The lab provides sample data to the eLEXNET Team, which then analyzes the lab data structure and prepares for the design phase.
4. **Map Lab Data Fields to Standard eLEXNET Data Fields:** After analyzing the sample data and with guidance from the lab's database expert, the eLEXNET Technical Team maps the data fields to eLEXNET standard data fields.
5. **Map reference values:** The lab provides their list of products, analytes, methods, and other related data to the eLEXNET Team, who then map the lab's values to standard FDA definitions. This step is critical to ensure eLEXNET reports are consistent, regardless of the data's source.
6. **Develop & test software:** The eLEXNET Team develops and tests the custom Data Exchange software based on the lab's data specification and data mapping.
7. **Install/Configure software:** The eLEXNET Team guides the lab's IT Team through software configuration and installation to the lab environment.
8. **User Acceptance Testing:** Together, the eLEXNET and lab IT teams will test the installed software before it is officially launched into the production environment.