# LIOFeron

Manual

# Content

# 1. Introduction

The program LIOferon is used to calculate of the results for the LIOFeron TB/LTBI test of company Lionex.
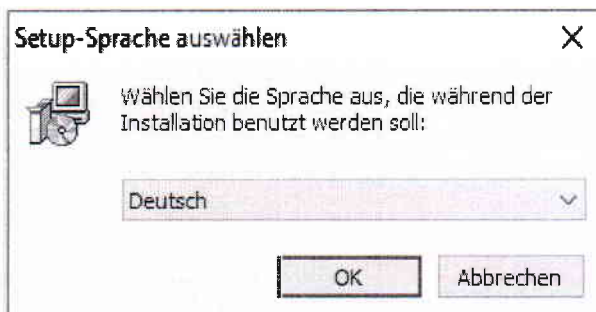
⚠

For correct calculation, it is necessary correctly execute the Testaudführung according to the manufacturer's instructions.
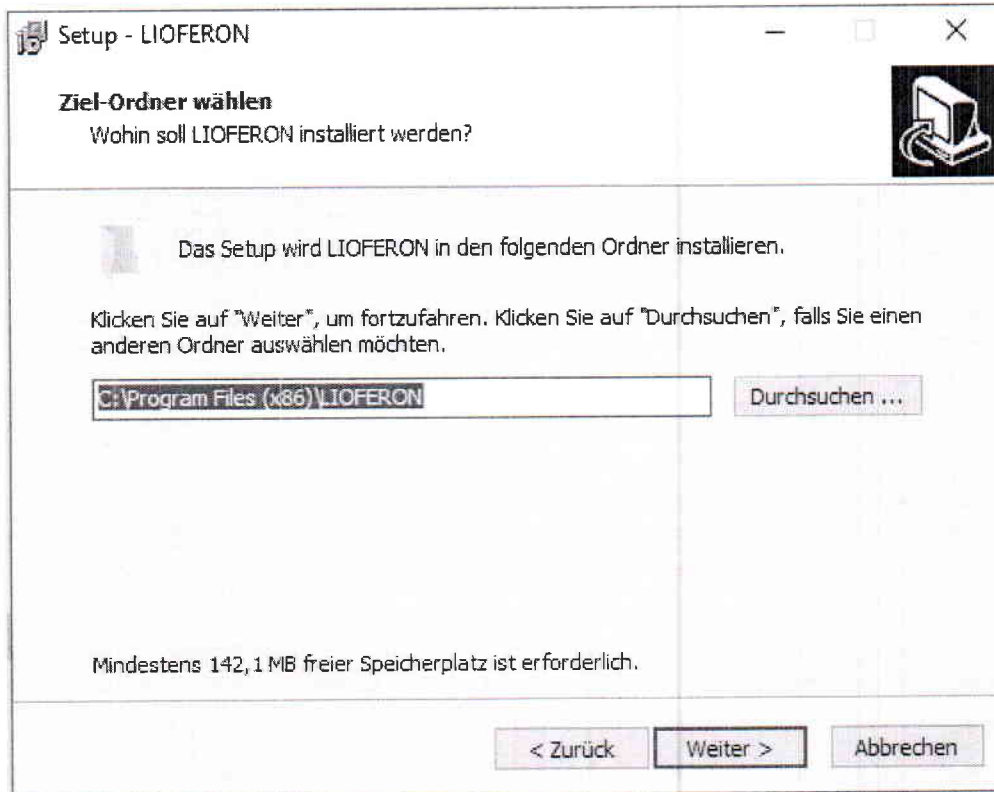
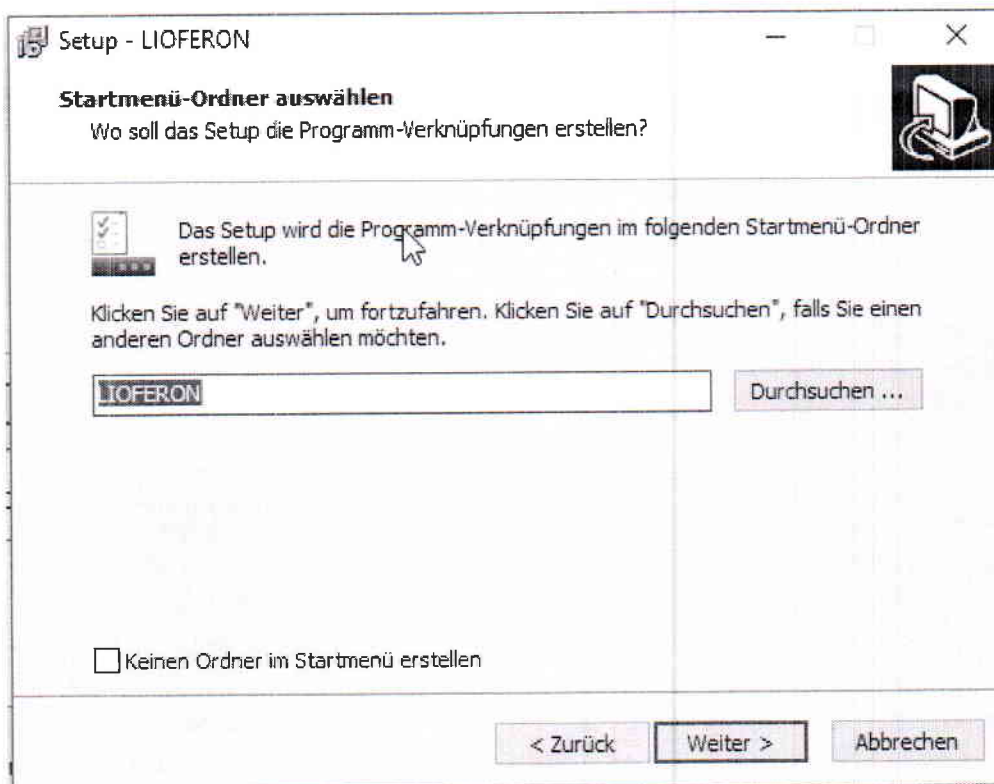

# 2. Installation

## 2.1.    Program Installation

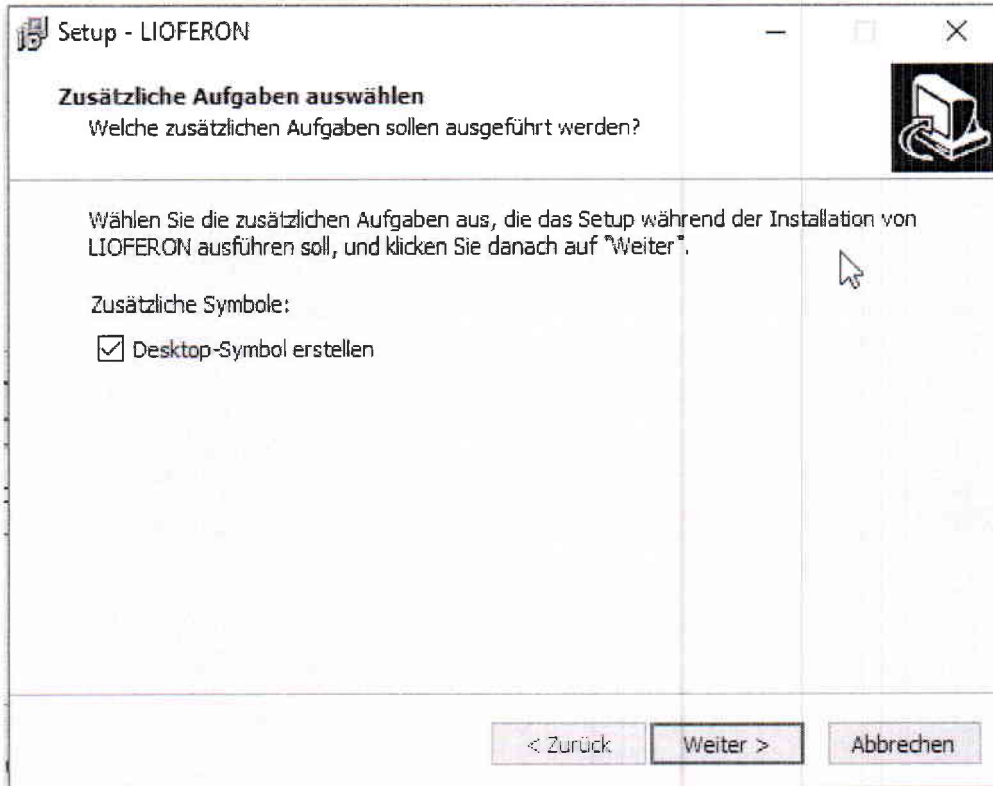Start the program LIOFeron_setup.exe. Select the Installation language



Run the installation wizard.,
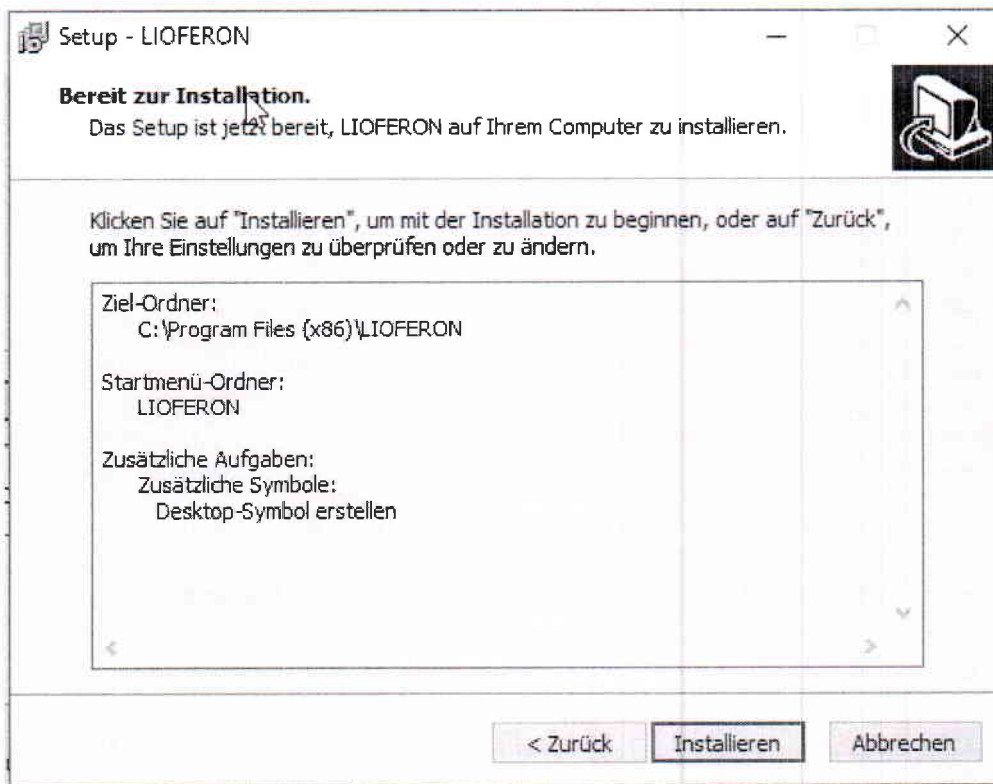
**Setup - LIOFERON**

**Ziel-Ordner wählen**
Wohin soll LIOFERON installiert werden?

Das Setup wird LIOFERON in den folgenden Ordner installieren.

Klicken Sie auf "Weiter", um fortzufahren. Klicken Sie auf "Durchsuchen", falls Sie einen anderen Ordner auswählen möchten.

C:\Program Files (x86)\LIOFERON          Durchsuchen ...

Mindestens 142,1 MB freier Speicherplatz ist erforderlich.

< Zurück          Weiter >          Abbrechen

Confirm the start menu folder



**Setup - LIOFERON**

**Startmenü-Ordner auswählen**
Wo soll das Setup die Programm-Verknüpfungen erstellen?

Das Setup wird die Programm-Verknüpfungen im folgenden Startmenü-Ordner erstellen.

Klicken Sie auf "Weiter", um fortzufahren. Klicken Sie auf "Durchsuchen", falls Sie einen anderen Ordner auswählen möchten.

LIOFERON          Durchsuchen ...

☐ Keinen Ordner im Startmenü erstellen

< Zurück          Weiter >          Abbrechen

Enable the creation of a desktop icon.

## Setup - LIOFERON

### Zusätzliche Aufgaben auswählen
Welche zusätzlichen Aufgaben sollen ausgeführt werden?

Wählen Sie die zusätzlichen Aufgaben aus, die das Setup während der Installation von LIOFERON ausführen soll, und klicken Sie danach auf "Weiter".

Zusätzliche Symbole:

☑ Desktop-Symbol erstellen

< Zurück    Weiter >    Abbrechen

Confirm the information about the installation and press install.

## Setup - LIOFERON

### Bereit zur Installation.
Das Setup ist jetzt bereit, LIOFERON auf Ihrem Computer zu installieren.

Klicken Sie auf "Installieren", um mit der Installation zu beginnen, oder auf "Zurück", um Ihre Einstellungen zu überprüfen oder zu ändern.

Ziel-Ordner:
    C:\Program Files {x86)\LIOFERON

Startmenü-Ordner:
    LIOFERON

Zusätzliche Aufgaben:
    Zusätzliche Symbole:
        Desktop-Symbol erstellen
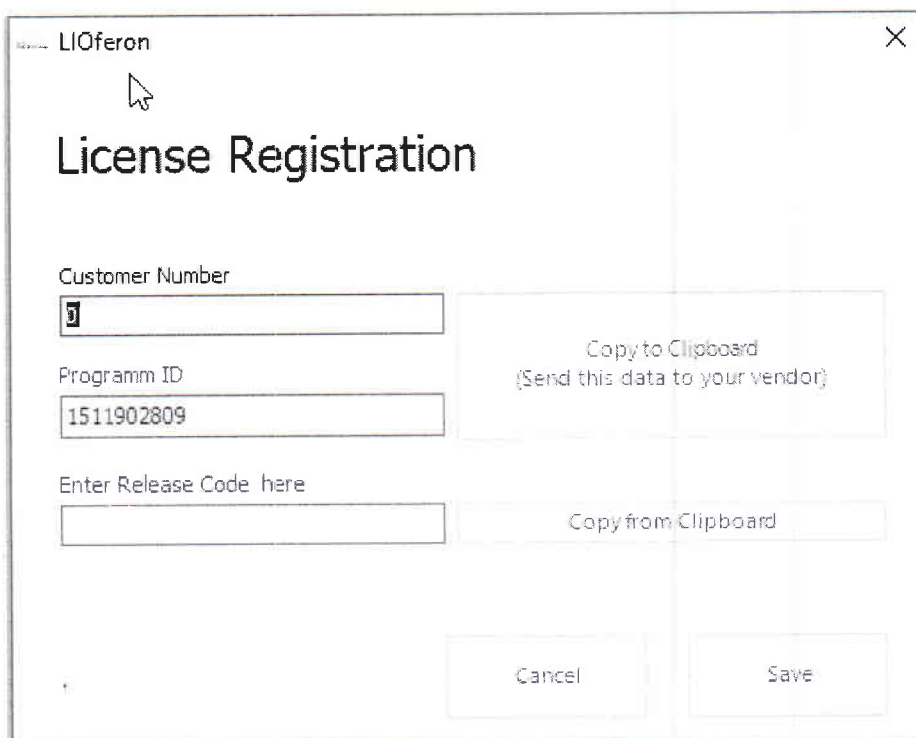
< Zurück    Installieren    Abbrechen

This menu is displayed after successful installation.

## 2.2. Program Registration

At first startup, you must register the program. Enter your customer number in the area provided and send the data to Lionex.

You can copy the data to the Clipboard using the button and easily insert into an email.

e.g.

Customer number: 1234

machine identifier: 1511902809


The machine Identifier is unique for each PC.

Get an unlock code from Lionex via email. Enter the unlock code in the area provided and press save. Correct unlock code is activated and starts the software.

The unlock code is may be limited. Should the activation code has expired, you are requesting a new code from LIONEX.

# 3. Program Usage

## 3.1.    Start of the Program

You can either start the program from the start menu or the desktop shortcut



Main menu
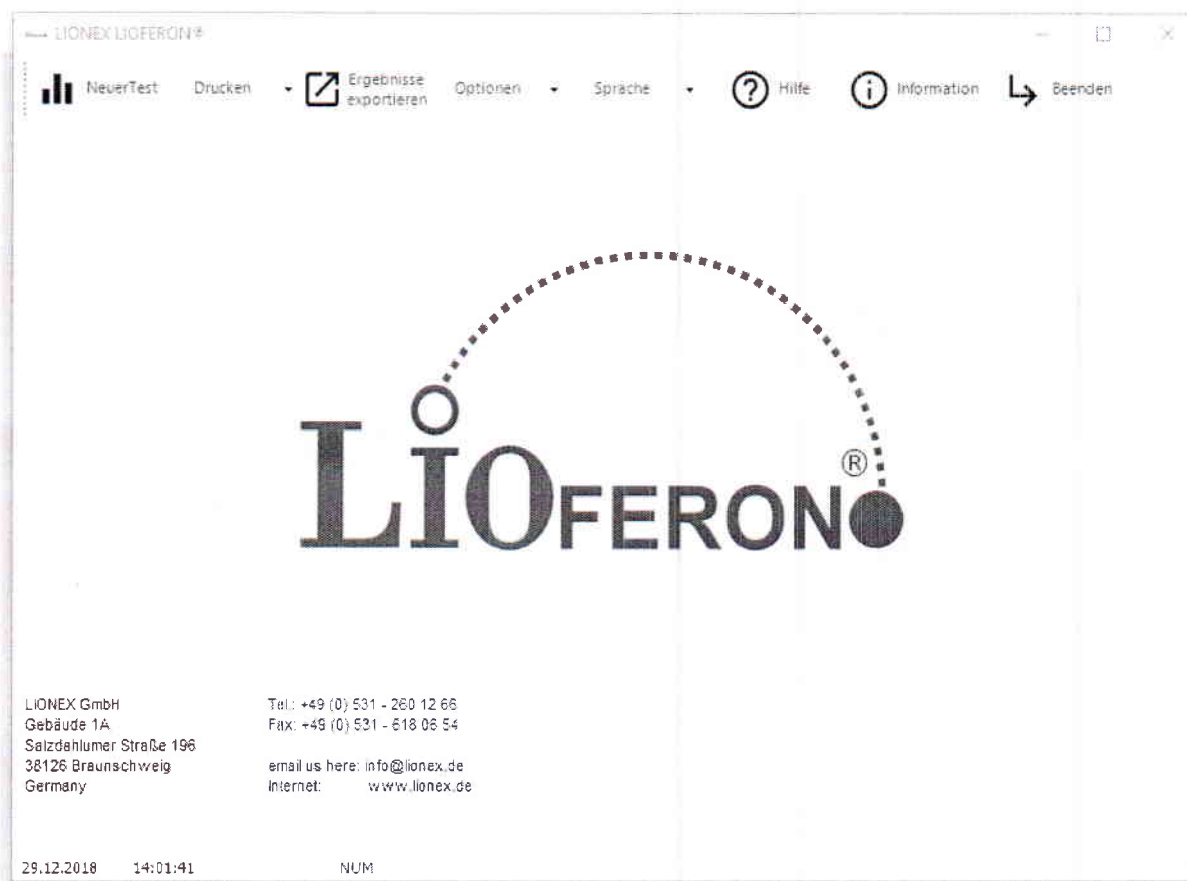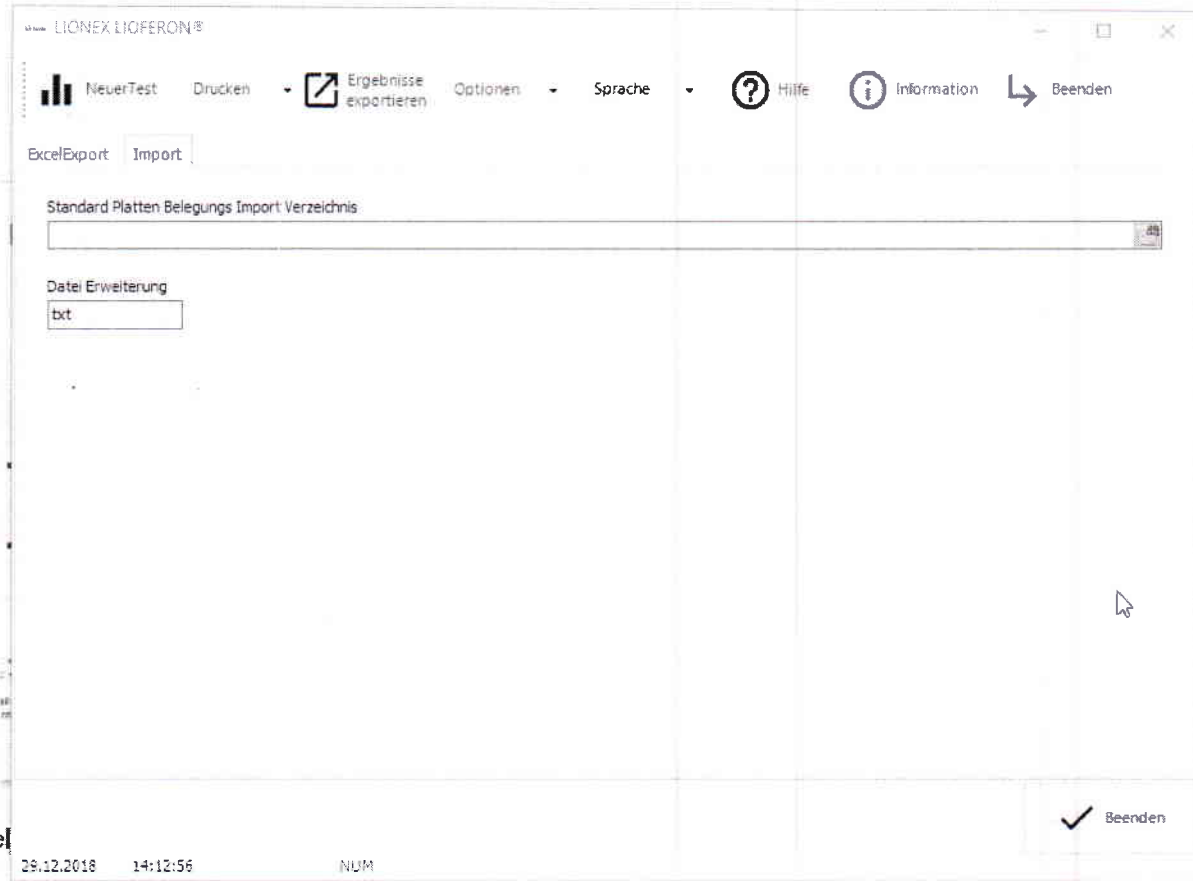


## 3.2.    Options

### 3.2.1.    Excel Export

In the menu options/Excel export, you can set the fields that are exported to an Excel file.  You can set whether the header and standards are exported. The export directory can also be adjusted.

With the filename option automatically create, create a unique name when saving. Optional the Save Dialog is definable.
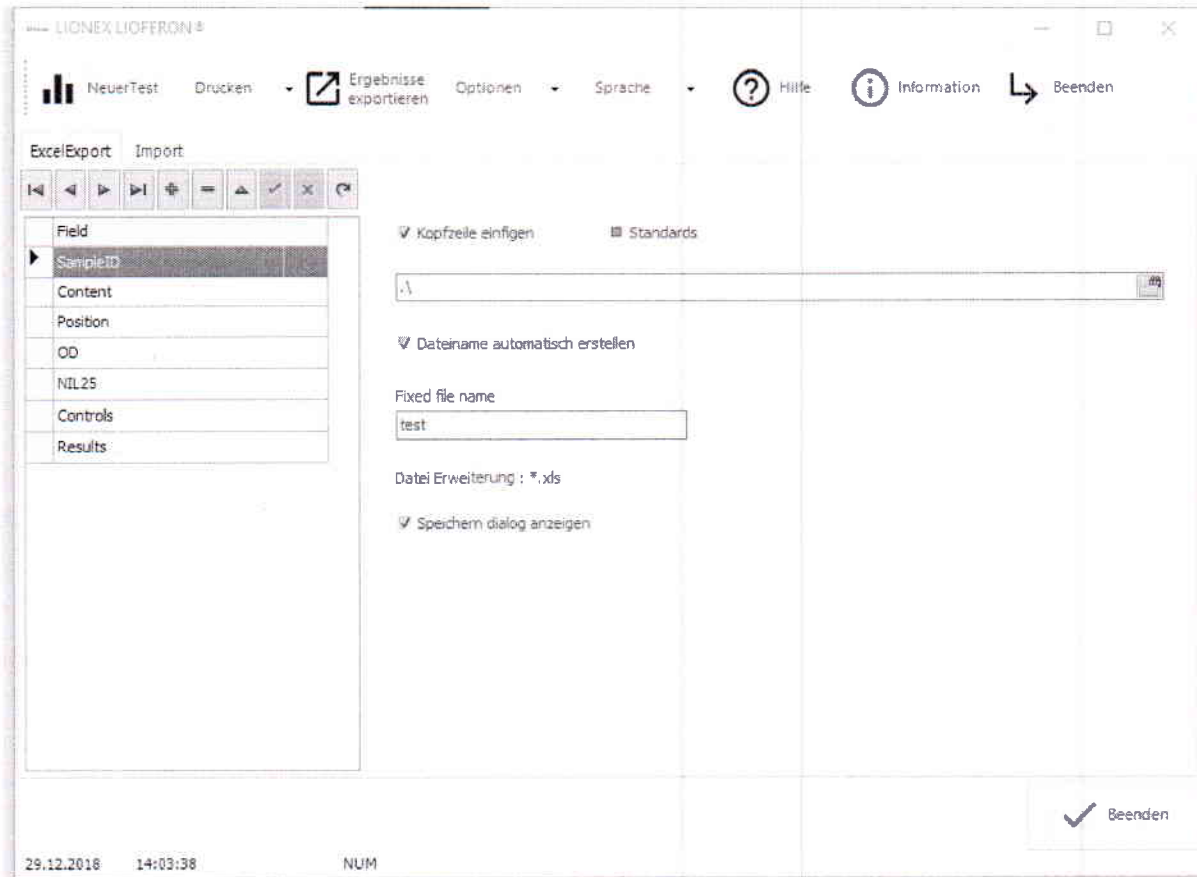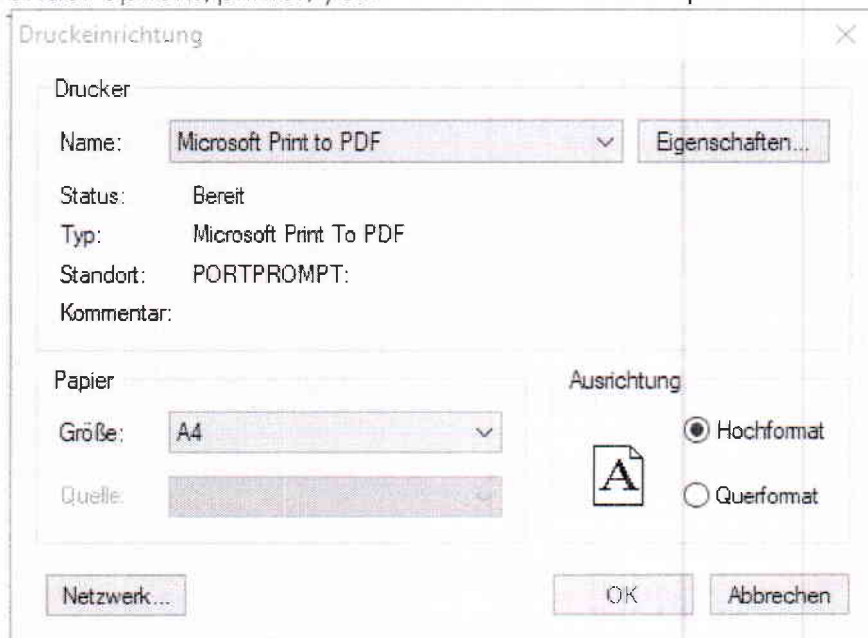
## 3.2.2. Import

In the import menu you set the directory for the disk usage and the file extension.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NeuerTest | Drucken | Ergebnisse exportieren | Optionen | Sprache | Hilfe | Information | Beenden |

ExcelExport    Import

Standard Platten Belegungs Import Verzeichnis

Datei Erweiterung

txt

✓ Beenden

29.12.2018    14:12:56          NUM

### 3.2.3.    Setup Printer

Under options/printer, you can define a default printer

**Druckeinrichtung**                                    ×

Drucker

Name:     Microsoft Print to PDF          ∨    Eigenschaften...

Status:    Bereit
Typ:       Microsoft Print To PDF
Standort:  PORTPROMPT:
Kommentar:

Papier                              Ausrichtung

Größe:    A4                    ∨        ⦿ Hochformat

Quelle:                                  A        ◯ Querformat

Netzwerk...                        OK        Abbrechen

### 3.2.4.    Setup Language

I m main menu, you can set the program language.

## 3.3.    Report designer

The program includes a Visual report designer can be used to create a template for an expression.
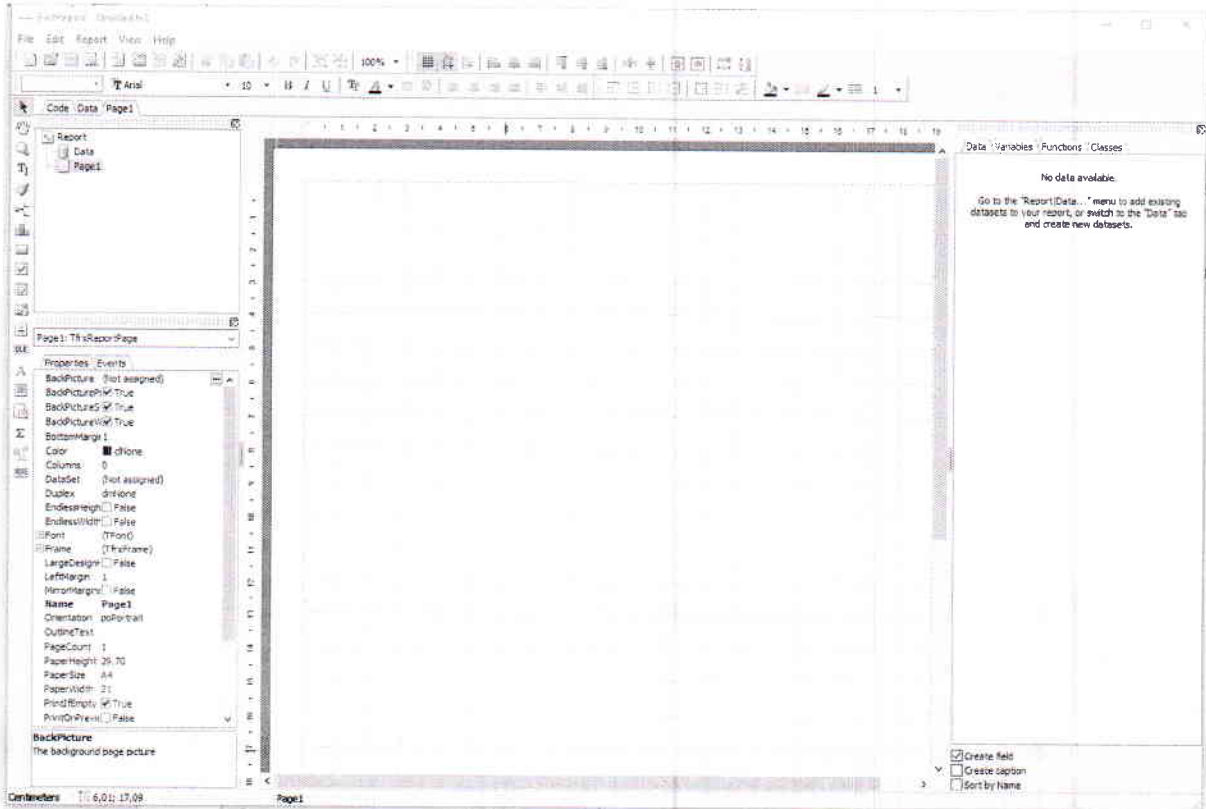


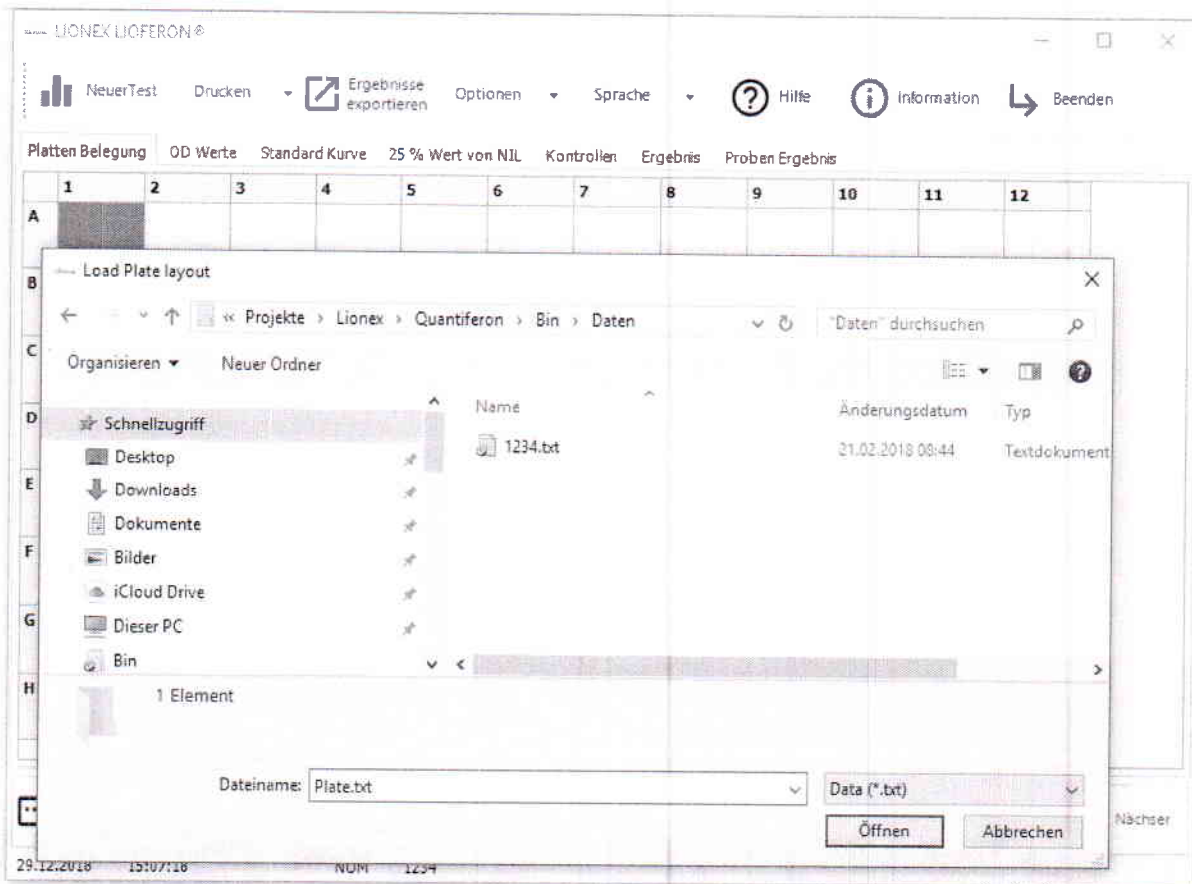## 3.4.    Resulting

Select new test

 NeuerTest

And enter the data into the fields provided, and press OK.
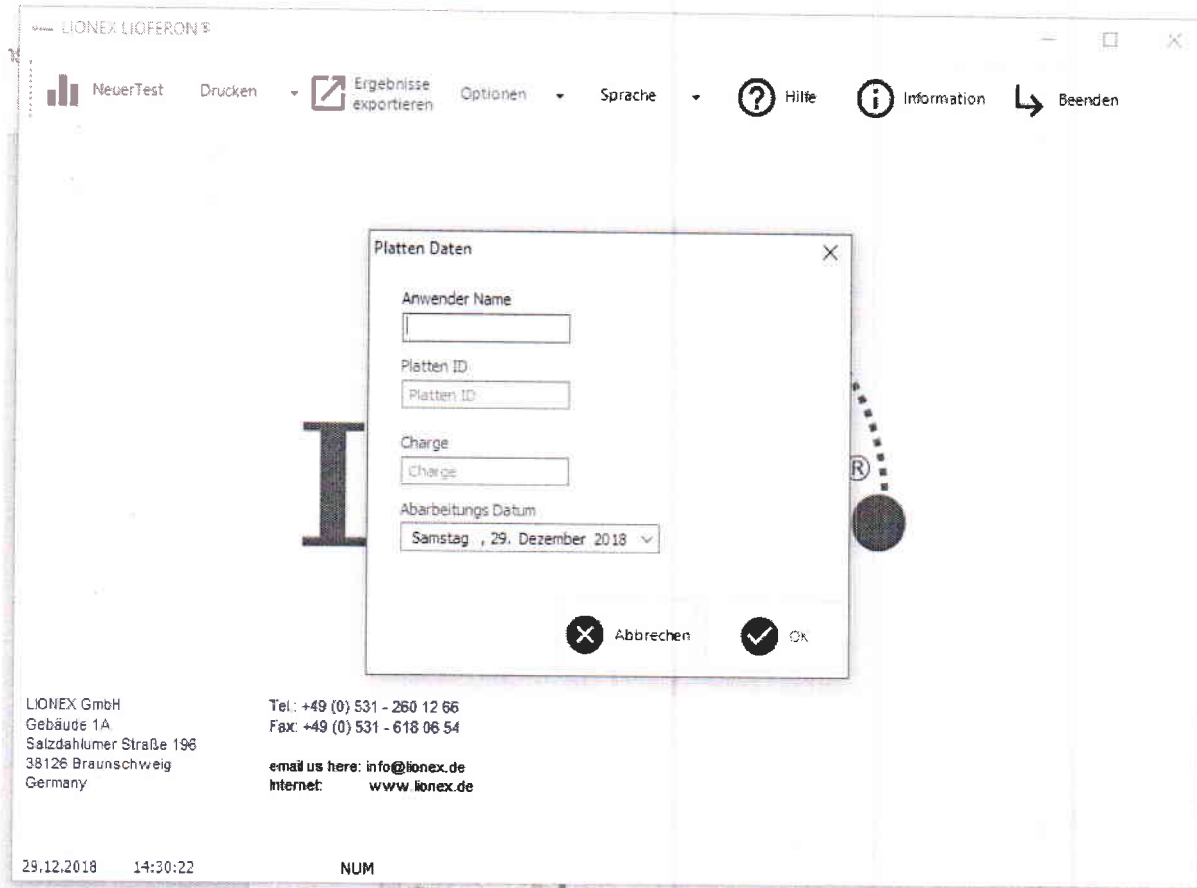
You can then select an import file with the data format (4. Data format) and import.

If you cancel the data import, you can manually assign the plate.

## 3.4.1. Data import through file



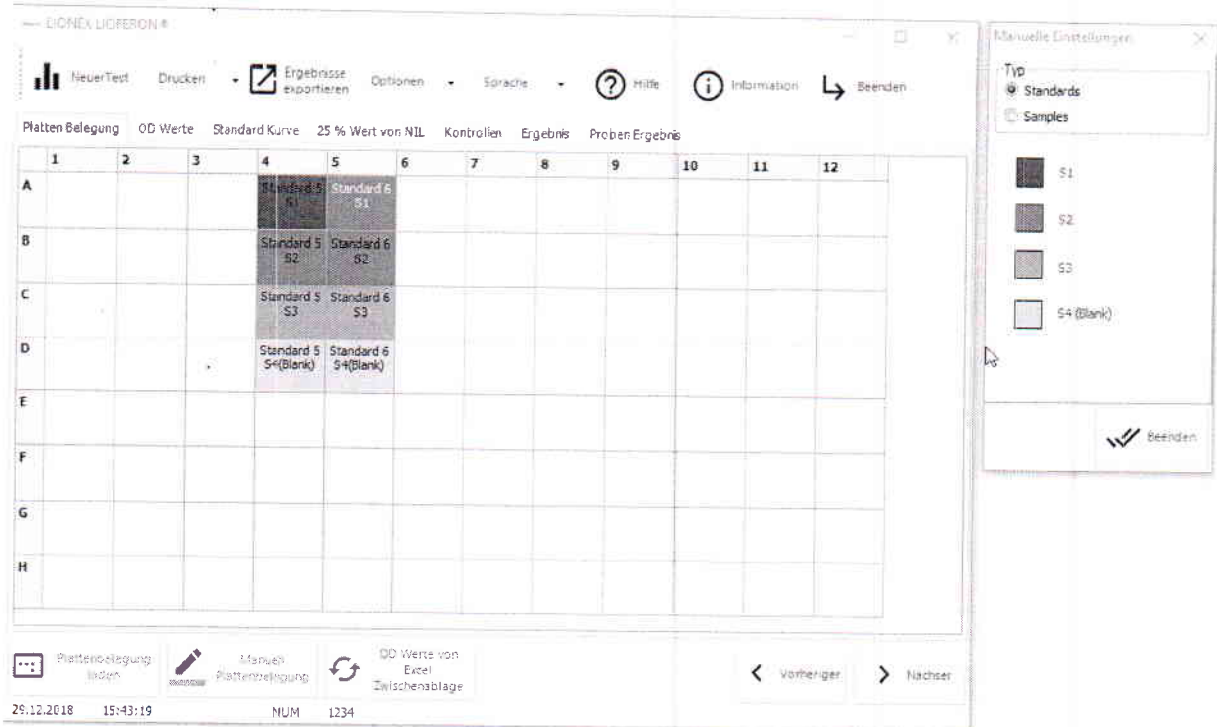The disk usage and the OD are automatically loaded values, if they exist in the import file.

## 3.5. Manual Plate Layout

If you cancel the data import, you can manually create the layout via the menu



### 3.5.1. Define Standards

Select it in the disk usage to position the standards standards of manual settings and click.

## 3.5.2. Define Samples

Select it in the disk usage to position the specimen samples in the manual settings and click. You can enter the sample ID directly in the menu. If you enter no sample ID this is assigned automatically.
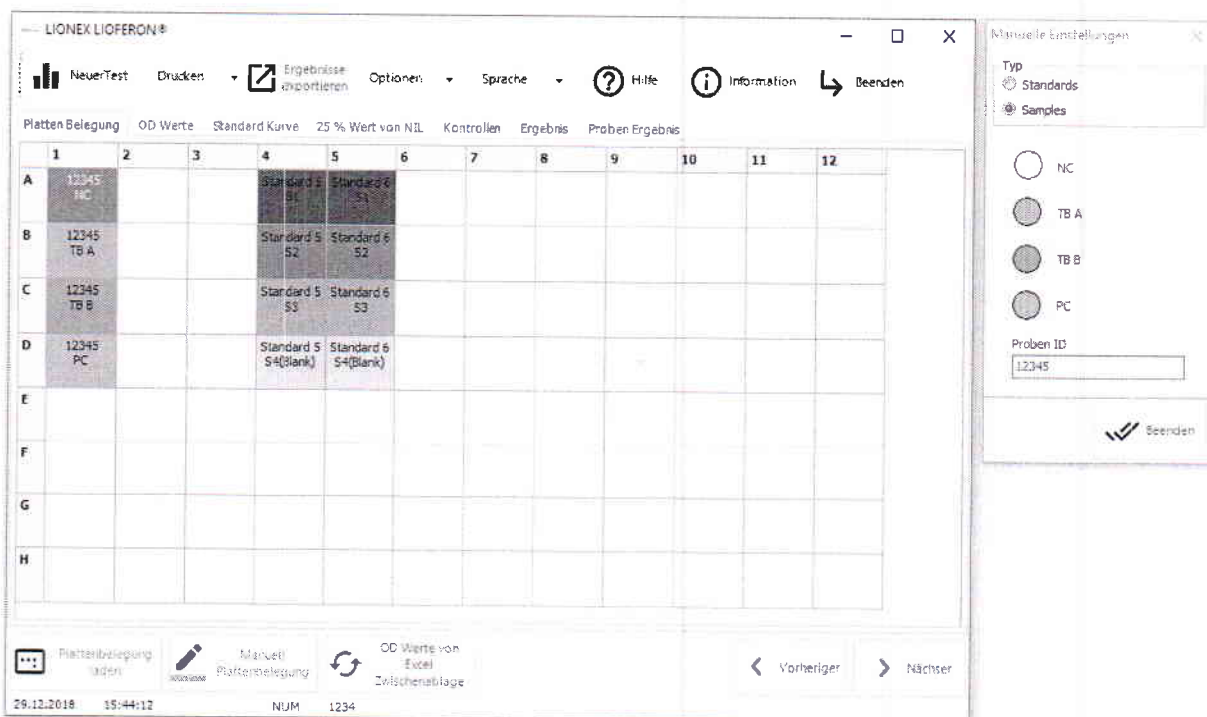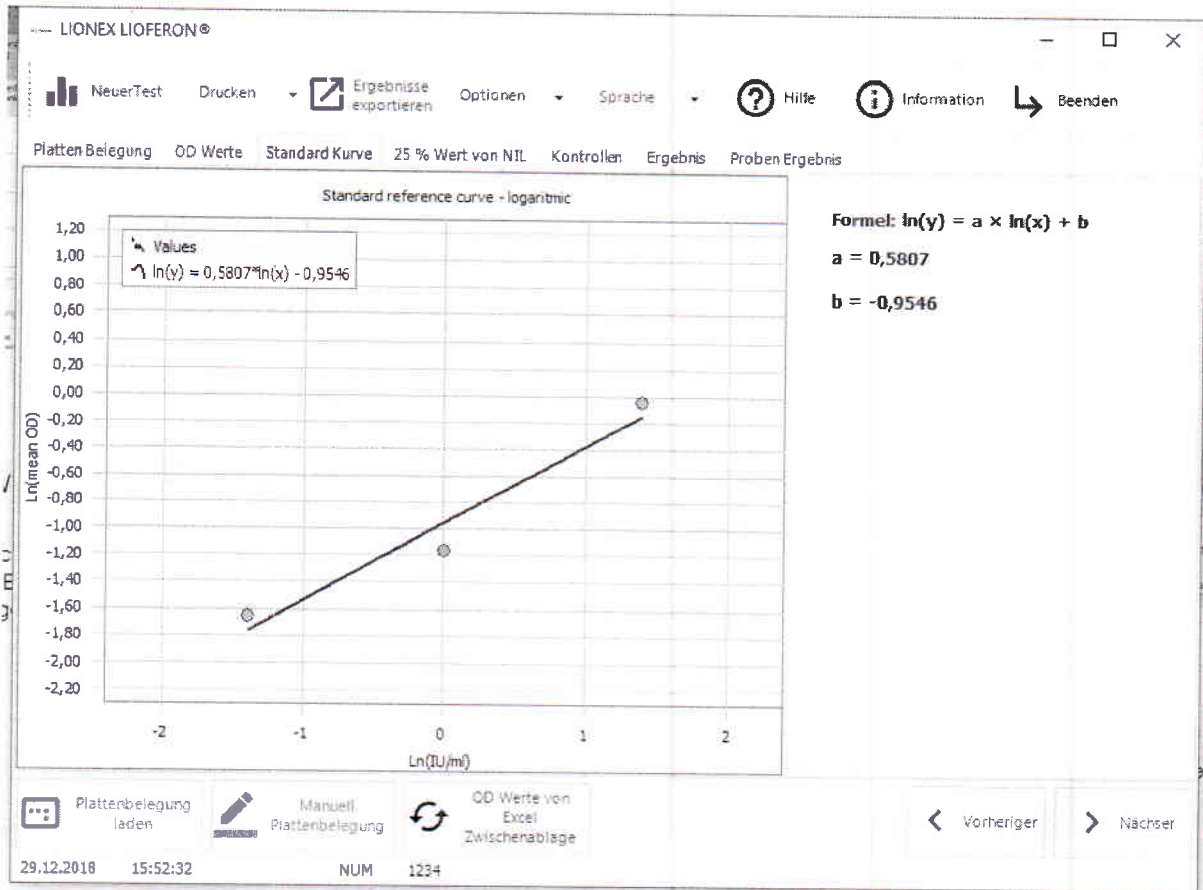
## 3.6.　OD Values from Excel

OD values can be imported directly from an Excel sheet. Select the range in Excel to do this, which contains the OD values and copy the data to the Clipboard. In the LIOFeron program, press OD values from Excel Clipboard.
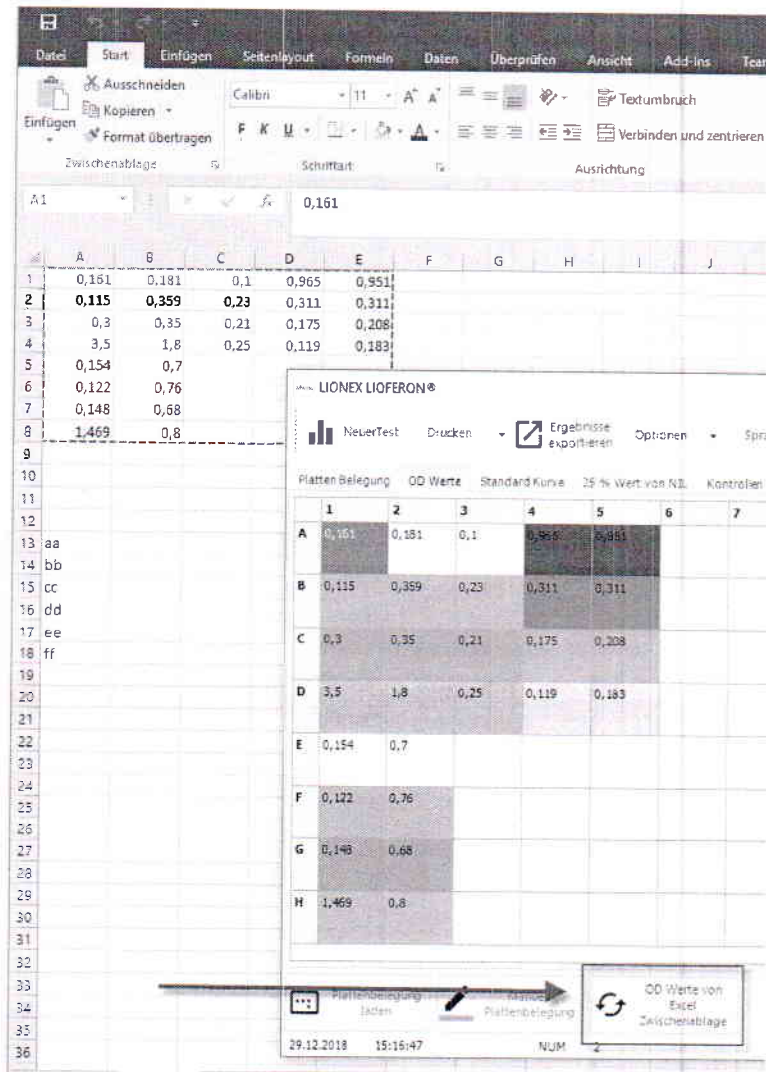


## 3.7.　Results

The analysis of the data is done automatically. The computed curve is shown in the window of standard curve.

LIONEX LIOFERON®

NeuerTest · Drucken · Ergebnisse exportieren · Optionen · Sprache · Hilfe · Information · Beenden

Platten Belegung · OD Werte · Standard Kurve · 25 % Wert von NIL · Kontrollen · Ergebnis · Proben Ergebnis

Standard reference curve - logaritmic

Values
$\ln(y) = 0{,}5807 \cdot \ln(x) - 0{,}9546$

Ln(mean OD) / Ln(IU/ml)

Formel: $\ln(y) = a \times \ln(x) + b$

$a = 0{,}5807$

$b = -0{,}9546$

Plattenbelegung laden · Manuell Plattenbelegung · OD Werte von Excel Zwischenablage · Vorheriger · Nächser

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Next to proceed to the 25% value.



LIONEX LIOFERON®

NeuerTest · Drucken · Ergebnisse exportieren · Optionen · Sprache · Hilfe · Information · Beenden

Platten Belegung · OD Werte · Standard Kurve · 25 % Wert von NIL · Kontrollen · Ergebnis · Proben Ergebnis

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0,055 | 0,068 | 0,025 | | | | | | | | | |
| B | 0,031 | 0,222 | 0,103 | | | | | | | | | |
| C | 0,163 | 0,212 | 0,088 | | | | | | | | | |
| D | 11,191 | 3,560 | 0,119 | | | | | | | | | |
| E | 0,052 | 0,700 | | | | | | | | | | |
| F | 0,035 | 0,807 | | | | | | | | | | |
| G | 0,048 | 0,666 | | | | | | | | | | |
| H | 2,509 | 0,881 | | | | | | | | | | |

Plattenbelegung laden · Manuell Plattenbelegung · OD Werte von Excel Zwischenablage · Vorheriger · Nächser

29.12.2018   15:54:24   NUM   1234

The controls will be followed.



Next, the results follow.

The last window displays the results as a table.



## 3.8.    Export

The results can be exported using the export function in Excel.
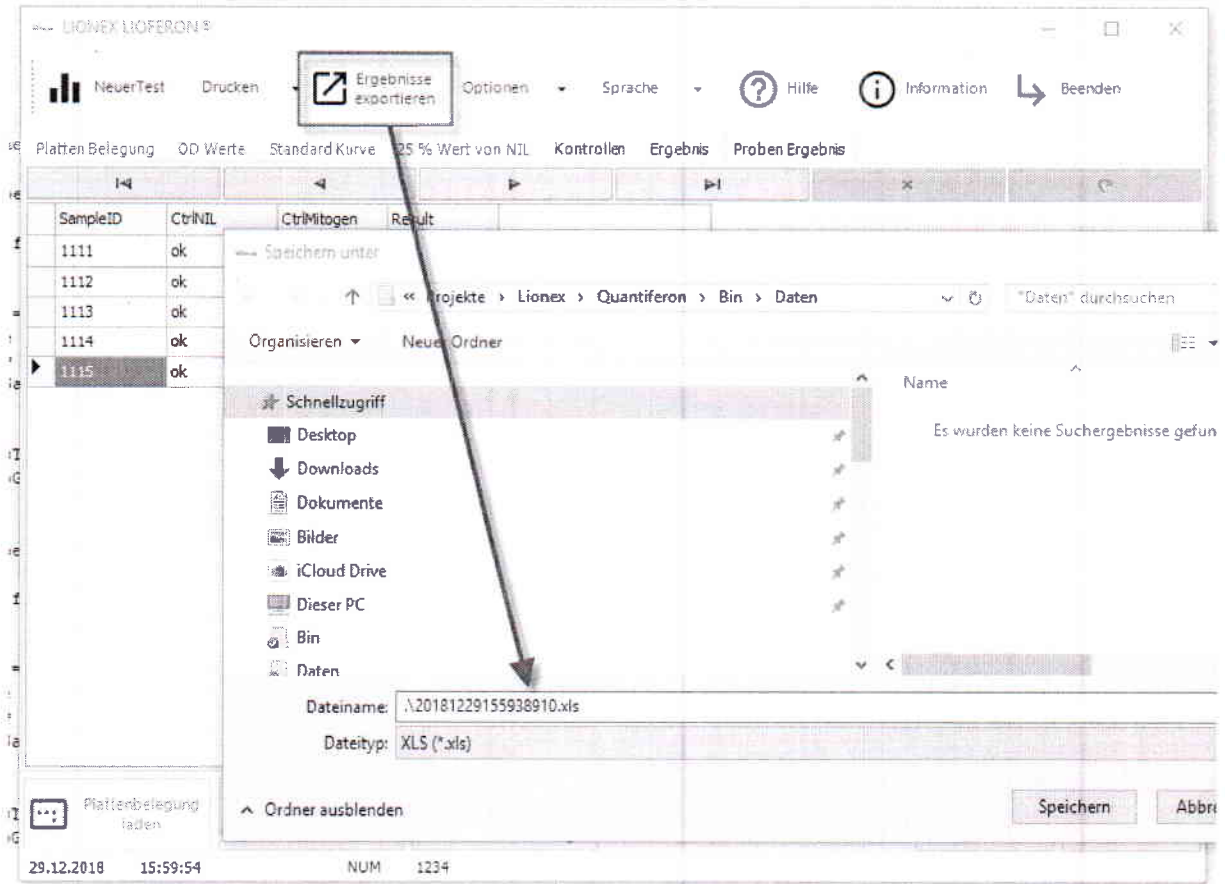
## 3.9. Print

On the print menu, you can create an expression previously defined with the report designer.

## LIOferon Result Report

29.12.2018 15:57:33

**LIO**FERON

| SampleID | Content | OD | Value | Control | Result |
|---|---|---|---|---|---|
| 1111 | | | | | |
| | NC | 0,161 | 0,056 | ok | Positive |
| | TB A | 0,115 | 0,031 | | Positive |
| | TB B | 0,3 | 0,163 | | Positive |
| | PC | 3,5 | 11,191 | ok | Positive |
| 1112 | | | | | |
| | NC | 0,154 | 0,052 | ok | Negative |
| | TB A | 0,122 | 0,035 | | Negative |
| | TB B | 0,148 | 0,048 | | Negative |
| | PC | 1,469 | 2,509 | ok | Negative |
| 1113 | | | | | |
| | NC | 0,181 | 0,068 | ok | Positive |
| | TB A | 0,359 | 0.222 | | Positive |
| | TB B | 0,35 | 0.212 | | Positive |
| | PC | 1,8 | 3,560 | ok | Positive |
| 1114 | | | | | |
| | NC | 0,7 | 0.700 | ok | Negative |
| | TB A | 0,76 | 0.807 | | Negative |
| | TB B | 0,68 | 0.666 | | Negative |
| | PC | 0,8 | 0.881 | ok | Negative |
| 1115 | | | | | |
| | NC | 0,1 | 0.025 | ok | Indeterminate |
| | TB A | 0,23 | 0.103 | | Indeterminate |
| | TB B | 0,21 | 0.088 | | Indeterminate |
| | PC | 0,25 | 0.119 | not ok | Indeterminate |
| S1 | | | | | |
| | S1 | 0,965 | 0.000 | | |
| | S2 | 0,311 | 0.000 | | |
| | S3 | 0,175 | 0.000 | | |
| | S4(Blank) | 0,119 | 0.000 | | |
| S2 | | | | | |
| | S1 | 0,951 | 0.000 | | |
| | S2 | 0,311 | 0.000 | | |
| | S3 | 0,208 | 0.000 | | |
| | S4(Blank) | 0,183 | 0.000 | | |

# 4. Data Format

Format of the text file to import

| Column | Content | Format |
|---|---|---|
| 1 | Plate Position | A1-H12 |
| 2 | Typ | Smp, Ctrl |
| 3 | Sample ID / Standard | Barcode, S1, S2 |
| 4 (optional) | OD Wert | 0,0..3,0 |

The 4 corresponding tubes must be always one after the other in the list.

Delimiter: (Semicolon) ;

Example:

A1;Smp;1111;0,161

B1;Smp;1111;0,115

C1;Smp;1111;0,300

D1;Smp;1111;3,500

E1;Smp;1112;0,154

F1;Smp;1112;0,122

G1;Smp;1112;0,148

H1;Smp;1112;1,469

A2;Smp;1113;0,181

B2;Smp;1113;0,359

C2;Smp;1113;0,350

D2;Smp;1113;1,800

E2;Smp;1114;0,700

F2;Smp;1114;0,760

G2;Smp;1114;0,680

H2;Smp;1114;0,800

A3;Smp;1115;0,100

B3;Smp;1115;0,230

C3;Smp;1115;0,210

D3;Smp;1115;0,250

A4;Ctrl;S1;0,965

B4;Ctrl;S1;0,311

C4;Ctrl;S1;0,175

D4;Ctrl;S1;0,119

A5;Ctrl;S2;0,951

B5;Ctrl;S2;0,311

C5;Ctrl;S2;0,208

D5;Ctrl;S2;0,183