

Technical note No. 0206. Rev. 1.1

## NucleoCounter® NC-200™

# Operation Qualification Protocol for the NucleoCounter® NC-200™ system

### Product description

The NucleoCounter® NC-200™ system enables the user to perform automated cell counting and analyses of a broad range of eukaryotic cells.

### Application

This protocol for the NucleoCounter® NC-200™ system is used for operation qualification.

### Introduction

The NucleoCounter® NC-200™ instrument comprises a piston actuator, sensors and electronic boards. This OQ protocol performs a series of quantitative measurements to verify correct operation of all these units. The measurement results are displayed at the end of the test and grouped in two categories: OK or Failed.

### Principle

The first part of the OQ measurements is performed on a Via1-Cassette™ loaded with fluorescent beads. This part verifies:

- Flow detection
- Counting capabilities using the different light sources
- General software and hardware operations

The second and last part of the OQ is performed without a cassette. This part verifies:

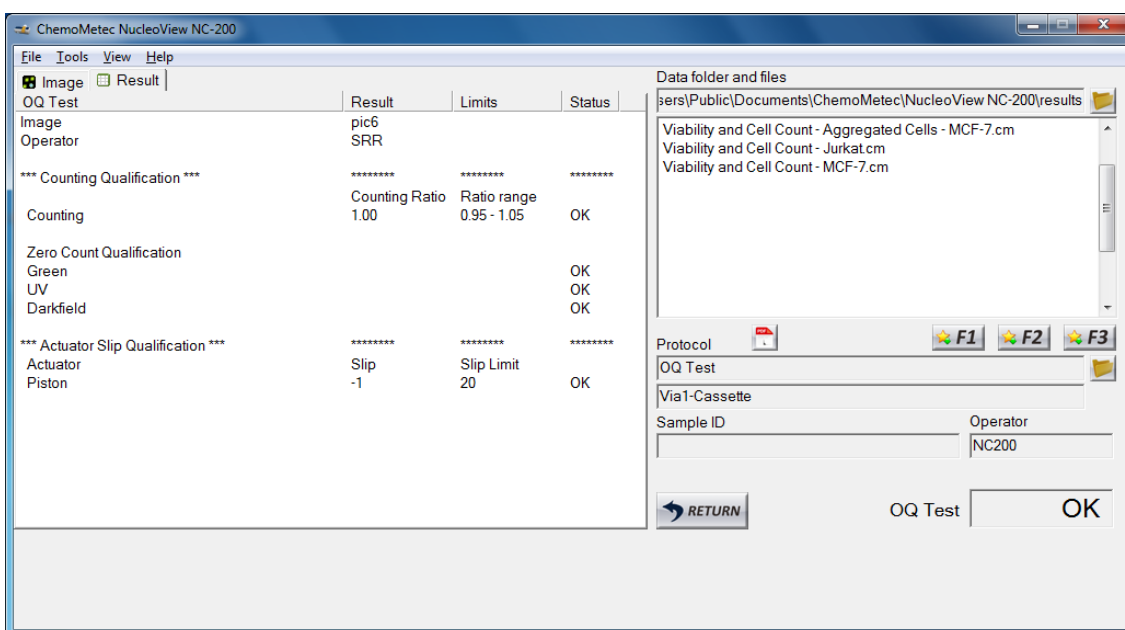
- Zero count
- Actuator slip

## Materials

- **OQ Beads Fluorescent Beads Type A**
- Via1-Cassette™

## Protocol (duration is around 1 minute)

- 1) Vortex the **OQ Beads Fluorescent Beads Type A** vial vigorously to bring the fluorescent beads into solution. Then load the Via1-Cassette™ with the bead solution (volume is ~60 µl).
- 2) Engage NucleoCounter® NC-200™ by starting NucleoView™ NC-200 software.
- 3) Select the “**OQ Protocol**” and press Run.
  - a) A message box will prompt you to place the Via1-Cassette™ loaded with beads in the fixture.
- 4) Place the Via1-Cassette™ with beads in the fixture and press OK in the message box or “Run” on the instrument.
  - a) The first part of the OQ (see Principle section above) will be performed.
  - b) In case any test is failed a warning box will appear to inform you that a test has failed. Close the box by pressing OK.
  - c) At the end of first part a message box will prompt you to remove the Via1-Cassette™ loaded with the bead solution from the fixture.
- 5) Remove the cassette and press OK in the message box or “Run” on the instrument.
  - a) The second part of the OQ (see Principle section above) will be performed.
  - b) In case the test is failed a warning box will appear to inform you that a test has failed. Close the box by pressing OK
  - c) At the end of the second part the result will be displayed in the result box in the lower right corner and extended results will be available in the result tab page (see below) showing a summary of the OQ results.



The csv file holding all the detailed results is named with date and time (OQ\_yyyymmdd\_hhmmss.csv) and placed in

the verification directory as documentation for the performed OQ.

#### **Handling and storage**

For handling and storage of ChemoMetec instruments, reagents, cassettes and NC-Slides refer to the corresponding product documentation. For other reagents refer to the material data sheet from the manufacturer of the reagents and chemicals.

#### **Warnings and precautions**

For safe handling and disposal of the ChemoMetec reagents, cassettes and NC-Slides refer to the corresponding product documentation and the NucleoCounter® NC-200™ user's guide. For other reagents refer to the safety data sheet from the manufacturer of the reagents and chemicals required for this protocol. Wear suitable eye protection and protective clothes and gloves when handling biologically active materials.

#### **Limitations**

The NucleoCounter® NC-200™ system is FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE. The results presented by the NucleoCounter® NC-200™ system depend on correct use of the reagents, cassettes and the NucleoCounter® NC-200™ instrument and might depend on the type of cells being analyzed. Refer to the NucleoCounter® NC-200™ user's guide for instructions and limitations.

#### **Liability disclaimer**

This application note is for RESEARCH PURPOSES ONLY. It is not intended for food, drug, household, or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. The above information is correct to the best of our knowledge. Users should make independent decisions regarding completeness of the information based on all sources available. ChemoMetec A/S shall not be held liable for any damage resulting from handling or contact with the above product.

#### **Product disclaimer**

ChemoMetec A/S reserves the right to introduce changes in the product to incorporate new technology. This application note is subject to change without notice.

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