

1.14962.0001

## Spectroquant® PipeCheck

### 1. Method

The respective check solution is diluted with distilled water using the pipette to be checked and the absorbance of the diluted solution is compared with that of a reference solution. Pipettes exhibiting deviations in volume exceeding 2.5 % are rejected as defective.

### 2. Applications

Check of the following total volumes<sup>1)</sup> of positive-displacement pipettes:

2.0 3.0 5.0 10.0 ml

<sup>1)</sup> These can also be achieved by the repeated addition of smaller volumes. Examples, see section 4 "Procedure".

### 3. Reagents and auxiliaries

The solutions are stable up to the date stated on the pack when stored closed at +15 to +25 °C.

#### Package contents:

24 cells with check solutions and 4 cells with the corresponding reference solutions:

Check solutions (6 cells of each)	Reference solutions (1 cell of each)	for total volume
Check 2.0 ml	Ref 2.0 ml	2.0 ml
Check 3.0 ml	Ref 3.0 ml	3.0 ml
Check 5.0 ml	Ref 5.0 ml	5.0 ml
Check 10.0 ml	Ref 10.0 ml	10.0 ml

1 cell with distilled water (**white** screw cap) labelled "Null/Zero"; **required only when using the Multy colorimeter, and the Move 100 colorimeter**

1 sheet of round stickers for numbering the cells

### 4. Procedure

Depending on the photometer, the measurement is carried out at **520, 525 or 530 nm in the absorbance mode of the photometer used** (e.g. Multy / Move 100 colorimeters: 530 nm; NOVA photometers: 525 nm).

#### Preparation:

- Enter the lot number in the control chart (see last page).
- Make photocopies of the control chart.
- Set one of the wavelengths specified above on the photometer, and in the absorbance mode measure the corresponding reference cell.  
Colorimeters Multy / Move 100: Prior to the measurement, make a zero setting using the cell containing distilled water!
- Enter the measurement result in the column "Reference result" of the control-chart photocopy.
- Enter the maximum permissible deviation of  $\pm 0.050 A$  of the reference value in the column "Tolerance range  $\pm 0.050 A$ ".

**Calculation:** Reference result - max. deviation = lower limit  
Reference result + max. deviation = upper limit

e.g. 1.750 A - 0.050 A = 1.700 A  
1.750 A + 0.050 A = 1.800 A

#### Checking a 2.0-ml pipette volume:

Distilled water (18 - 22 °C)	2.0 ml <sup>1)</sup>	Pipette into a <b>Check 2.0 ml</b> cell with the pipette to be checked and mix.
Measure in the absorbance mode at the corresponding wavelength.		

<sup>1)</sup> Total volume; it is also possible to pipette e.g. 2 x 1.0 or 4 x 0.5 ml.

#### Checking a 3.0-ml pipette volume:

Distilled water (18 - 22 °C)	3.0 ml <sup>1)</sup>	Pipette into a <b>Check 3.0 ml</b> cell with the pipette to be checked and mix.
Measure in the absorbance mode at the corresponding wavelength.		

<sup>1)</sup> Total volume; it is also possible to pipette e.g. 2 x 1.5 or 3 x 1.0 ml.

#### Checking a 5.0-ml pipette volume:

Distilled water (18 - 22 °C)	5.0 ml <sup>1)</sup>	Pipette into a <b>Check 5.0 ml</b> cell with the pipette to be checked and mix.
Measure in the absorbance mode at the corresponding wavelength.		

<sup>1)</sup> Total volume; it is also possible to pipette e.g. 2 x 2.5 or 5 x 1.0 ml.

#### Checking a 10.0-ml pipette volume:

Distilled water (18 - 22 °C)	10.0 ml <sup>1)</sup>	Pipette into a <b>Check 10.0 ml</b> cell with the pipette to be checked and mix.
Measure in the absorbance mode at the corresponding wavelength.		

<sup>1)</sup> Total volume; it is also possible to pipette e.g. 2 x 5.0 or 4 x 2.5 ml.

#### Note on the measurement:

For photometric measurement the cells must be clean. Wipe, if necessary, with a clean dry cloth.

#### Evaluation:

Enter the measured absorbance values in the column "Check result" of the control-chart photocopy and compare with the corresponding value in the "Reference result" column.

If the check result is **within the range of tolerance of the reference result**, the pipette volume being checked is in order.

If the check result is **outside the range of tolerance of the reference result**, this indicates a systematic error.

### 5. Notes

- **It is recommended to conduct the check described above at least once every three months.**
- **Information on disposal can be obtained at [www.disposal-test-kits.com](http://www.disposal-test-kits.com).**



