

# RID 3-PLATE<sup>®</sup>, COMBI-PLATE<sup>®</sup>

Quantitative Determination of Serumproteins  
by Simple Radial Immunodiffusion (RID)

Available products:

PRODUCT NAMES OF THE PLATES	3-PLATE <sup>®</sup>		
<b>α1- ACID GLYCOPROTEIN</b>	8 x 3 tests	REF	4416
<b>ANTITHROMBIN III</b>	8 x 3 tests	REF	4402
<b>C3c</b>	8 x 3 tests	REF	4404
<b>C4</b>	8 x 3 tests	REF	4405
<b>κ free and bound CHAINS</b>	8 x 3 tests	REF	4406
<b>λ free and bound CHAINS</b>	8 x 3 tests	REF	4407
<b>IgA</b>	8 x 3 tests	REF	4410
<b>IgG</b>	8 x 3 tests	REF	4411
<b>IgM</b>	8 x 3 tests	REF	4412
<b>TRANSFERRIN</b>	8 x 3 tests	REF	4415
	<b>COMBI-PLATE<sup>®</sup></b>		
<b>IgA + IgG + IgM</b>	8 x 3 tests	REF	4491
<b>C3c + C4</b>	8 x 2 tests	REF	4490
<b>κ and λ free and bound CHAINS</b>	8 x 2 tests	REF	4493
<b>READING LENS WITH 1/10 mm</b>			
<b>Peak Scale Lupe 7x</b>		REF	4492

## INTENDED USE

Kit for quantitative determination of proteins in body fluids.

## PRINCIPLE

The test defines serum proteins by simple radial immunodiffusion plate. A proper serum quantity is placed in the agarose well, containing a proper mono-specific antibody. The serum spreads in the agarose and the contained antigens form some immuno complexes with the antibody. A precipitation ring, whose dimensions are proportional to the protein quantity in the serum, forms.

## REAGENTS

**RID plates** containing mono-specific antibody to the protein written on the label.

**STABILITY:** Stored at 2-8°C in their original pouch, RID plates can be used up to the expiration date on the label.

**DO NOT FREEZE.** Do not lay rid plates on the freezing support in the refrigerator. Store rid plates horizontally and upside down, to avoid water drop formation inside the well. Avoid thermal and physical shocks.

## ADDITIONAL REAGENTS AND MATERIAL REQUIRED BUT NOT SUPPLIED

Calibrators.

Microliter syringe or pipette to accurately distribute 5 µl of sample.

Rid plate reader, or magnifier to measure the precipitation ring diameter with 0.1 mm accuracy.

## SPECIMEN

See enclosed table of reference values.

## ASSAY PROCEDURE

Open the pouch, uncap and wait about 10-15 minutes at room temperature to allow any eventual condensation to evaporate. Do not pipette any sample or calibrator if any humidity is present in the wells. Pipette 5 µl of sample in the several wells. Use the remaining sample within one week, keeping the plate stored at 2-8°C, sealed in its original pouch and in a humid room. Re-cap and incubate at room temperature (about 22°C, avoid extreme temperatures).

*Avoid that agarose gel becomes dry during incubation.*

*In order to reduce evaporation, put the plate in a plastic bag along with an wet handkerchief.*

## EVALUATION OF THE RESULTS

Once the diffusion is over, whose lasting depends on the protein, from 48 to 72 hours (see table of reference values), measure the precipitation ring diameter.

In case of doubt regarding the complete diffusion, check the diameter after 24 hours, to make sure no diameter increasing happened.

In order to control if the diameter is more higher than the first reading. Measure the diameter with 0.1 mm accuracy, using a rid plate reader. Otherwise, a magnifier or with an enclosed scale can be used. Measure the sample precipitation diameter and on the attached reference value table read the concentration protein value.

## REFERENCE VALUES

See attached table of reference values.

## LIMITS OF THE METHOD

In the reference value table, limits are reported for a reliable method. Higher values are to be considered indicative. In this case, dilute the sample and consider this dilution in the calculation.

## NOTES

To check the test performing conditions, pour 5 µl of calibrator in the plate well, incubate and read the ring diameter. Compare it to the value on the table: differences higher than about 0.2 mm in comparison to the value assigned to the calibrator are significant. If not due to inexperience, they may be due to environmental conditions, to measuring system (pipette) mistakes, or to the operator's handling, and therefore to systematic mistakes. In case, consider them during sample calculations.

## REFERENCES

Available on request.



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