

# Measurement of Albumin Secretion as Functionality Test

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## PARTNERS AND COLLABORATIONS

### Organisation

**Name of the organisation** Vrije Universiteit Brussel (VUB)

**Department** Pharmaceutical and Pharmacological Sciences

**Specific Research Group or Service** In Vitro Toxicology and Dermato-Cosmetology

**Country** Belgium

**Geographical Area** Brussels Region

## SCOPE OF THE METHOD

<b>The Method relates to</b>	Human health
<b>The Method is situated in</b>	Basic Research
<b>Type of method</b>	In vitro - Ex vivo
<b>Specify the type of cells/tissues/organs</b>	parenchymal liver cells, stem cell-derived hepatocyte-like cells

## DESCRIPTION

### Method keywords

ELISA

albumin

### Scientific area keywords

in vitro cell culture

hepatic in vitro model

hepatic differentiation

liver cells

### Method description

Albumin secretion in the supernatant of *in vitro* cultures can be measured by an enzyme-linked immunosorbent assay. The assay is based upon a quantitative sandwich enzyme immunoassay technique and measures albumin in the culture medium of primary hepatocytes and/or hepatocyte like cells. Standards and samples are sandwiched between an immobilized polyclonal antibody and a biotinylated polyclonal antibody specific for albumin. The latter is recognized by a streptavidinperoxidase conjugate and after adding a peroxidase enzyme substrate, a blue color is developed. The blue product, on its turn, is converted towards a yellow derivative of which the absorbance can be measured at 450 nm.

### Lab equipment

Multiplate reader.

### Method status

History of use

## PROS, CONS & FUTURE POTENTIAL

### Advantages

Easy to use.

## REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

### References

Bolley et al. Effect of Trichostatin A on miRNA expression in cultures of primary rat hepatocytes. *Toxicol Int J* 2011 Sep; 25(6):1173-82

