

**Running test in CG990 subject  
: separation of proteins**

**version 01**

name

date

**1) Which two amino acids are responsible for negative charge of proteins?**

- a) glutamate, aspartate
- b) tyrosine, alanine
- c) arginine, lysine
- d) glutamine, asparagine

**2) Hypothetical protein with relative molecular weight 30 kDa and pI = 9.0 is going to be found after 2D GE (strip 3-10, vertical 10%T SDS-PAGE) in the gel:**

- a) at the bottom edge, between left and right lower quadrants
- b) in upper left quadrant
- c) in lower right quadrant
- d) the protein will not be in the gel

**3) What does it mean partial separation?**

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**version 02**

name

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**1) Using which method, we check the protein preparation yield?**

- a) nuclear magnetic resonance
- b) mass spectrometry
- c) denaturing gel electrophoresis
- d) liquid chromatography

**2) Series of samples enabling a result accuracy evaluation are?**

- a) technical replicates
- b) methodical replicates
- c) experimental (biological) replicates
- d) error replicates

**3) What is the importance of so called peak capacity?**

**Running test in CG980 subject  
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**version 03**

name

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**1) Which methods are used to separate proteins according to charge?**

- a) ion-pairing chromatography on reversed phases (IP-RPLC)
- b) chiral chromatography
- c) hydrophobic interactions chromatography
- d) ion-exchange chromatography

**2) What is the purpose of separation in the first dimension of two-dimensional gel electrophoresis (2D GE)?**

- a) separation of proteins according to their molecular mass
- b) separation of proteins according to their isoelectric point
- c) pre-separation to achieve high final peak capacity
- d) pre-separation to achieve high final resolution

**3) What is the protein equaliser?**

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**version 04**

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**1) In a frame of separation methods, what does it mean complete separation?**

- a) separation of a mixture down to individual proteins
- b) separation of a mixture down to protein classes according to chosen property
- c) separating a group of proteins from mixture
- d) selective separation of one protein from mixture

**2) What does not belong among possible inputs of protein separation?**

- a) whole-cell lysate
- b) mixture of proteolytic products of protein cleavage
- c) protein mixture after recombinant protein expression
- d) decantate after precipitation and centrifugation of proteins

**3) What is the importance of multidimensional separations?**