CONCEPT: PROTEIN EXTRACTION

1) Protein Extraction

●1st step in purifying a protein: remove _____ the proteins from the source (typically cells).

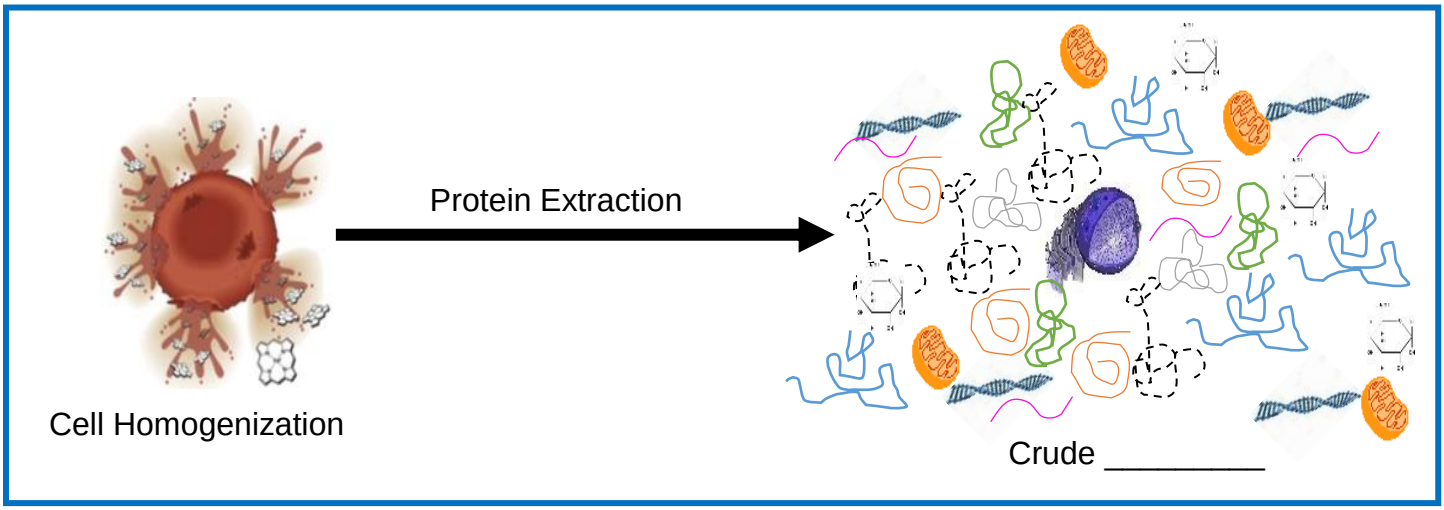
●*Cell* _____: process of breaking open cells into fragments to release *all* its contents into solution.

- □ _____ extract (or *homogenate*): *total* released contents of the cell.
- □ Crude extract includes organelles, lipids, carbohydrates, nucleic acids & _____.

●Several techniques used for *cell homogenization*:

- □ _____ Buffers.
- □ Blender's/_____.
- □ _____ (sound waves).

EXAMPLE: Protein Extraction.



PRACTICE: A microbiologist is looking to study a new version of beta-galactosidase (lacZ) from *E. coli* cells. To purify lacZ for experimental studies, an effort is usually made to first:

a) Perform experiments to confirm the amino acid composition of lacZ.
b) Perform experiments to confirm the amino acid sequence of lacZ.
c) Perform experiments to confirm the molecular weight of lacZ.
d) Homogenize the cells to extract lacZ for a later attempt at purification.

lacZ