

UNIVERSIDAD NACIONAL DE QUILMES - TECNICATURA UNIVERSITARIA EN QUÍMICA
INGLES BASICO - FINAL LIBRE

Nombre:..... Legajo:..... Fecha:.....

Nota IMPORTANTE: todas las palabras, frases, ejemplos, etc. que utilice para la resolución de las actividades deberán estar marcadas en el texto y con referencia a la línea en que aparecen.

In the case of solid substances crystallization is ordinarily used for purifying organic compounds, although with certain compounds purification can be more readily effected by sublimation or distillation. The

3 separation of two substances by means of crystallization is based on the fact that they are present in the mixture to be separated into its constituents in different amounts, or on the fact that the two substances possess different solubilities in the liquid used as a solvent. When it is desired to purify a substance by

6 crystallization a solvent should be selected, if possible, in which the impurity is readily soluble, and in which the substance sought is more or less difficultly soluble. Purification is effected most easily when the substance to be purified is appreciably soluble in the hot solvent, and much less soluble in it when cold. If

9 the two conditions stated above can be combined—and this is possible in many cases—purification is readily accomplished. The solvents most commonly used in crystallization are water, alcohol, ether, benzene, petroleum ether, ligroin, carbon bisulphide, chloroform, acetone, and glacial acetic acid. In

12 certain cases hydrochloric acid, carbon tetrachloride, ethyl acetate, toluene, and nitrobenzene have been found of particular value as solvents. In order to crystallize a compound the solubility of which is not known, preliminary tests should be made with the solvents enumerated above; about 0.1 gram or less of

15 the substance should be used in each test. The solid is placed in a small test-tube, and the solvent is added a drop at a time and the tube is shaken. After the addition of about 1 cc. of the liquid, if the substance has not dissolved, the tube should be heated until the liquid boils. If the substance does not

18 dissolve, more liquid should be added in small quantities until solution occurs. If a very large amount of the liquid is required for solution, or the substance proves insoluble, another solvent must be used. When solution takes place the tube is cooled by running water. If the substance separates, it is redissolved by

21 heating, and the contents set aside to cool slowly, when crystals will probably form. If the substance does
not separate to a considerable degree when the hot solution is cooled, similar tests should be made with
other liquids. If none of the solvents can be used in this way, either obtain the substance by spontaneous
24 evaporation, or use a mixture of liquids. If the compound is to be crystallized by spontaneous
evaporation, cold saturated solutions, prepared by dissolving about 0.1 gram or less of the substance in a
number of solvents, are poured onto watch-glasses and left to evaporate slowly. Some substances form
27 solutions from which the first crystals separate with difficulty. In such cases the solution is "seeded" by
adding a trace of the solid substance; a piece the size of the bead of a small pin is sufficient.
Crystallization of such substances can often be brought about by scratching with a glass rod the side of
30 the vessel containing the solution; the rough surface so formed assists materially in the formation of the
first crystal, after which crystallization proceeds readily. Finally, select the liquid which yields well-formed
crystals, and does not evaporate too slowly for the solvent.

- 1) Lea el texto e identifique cinco frases sustantivas centrales. Escríbala en castellano (10p)
- 2) Elija tres de las oraciones subrayadas y escriba lo que entiende en castellano coherente.(20)
- 3) Marque a lo largo del texto un adjetivo, un comparativo y un superlativo si hubiera. (14p)
- 4) Identifique un ejemplo de cada tiempo verbal (presente/pasado/futuro) si hubiera. (8p)
- 5) Identifique en el texto una oración en voz pasiva y escríbala en castellano. Explíquela. (10p)
- 6) Indique las referencias de tres de las frases o expresiones en negrita. (14p)
- 7) Elija tres terminaciones –ing del texto y escriba como las leería en castellano o su categoría (adjetivo, sustantivo, verbo) en la frase en la que se encuentran. (14p)
- 8) Elija tres terminaciones –ed del texto y escriba en castellano como las leería en la frase en la que se encuentran. (14p)
- 9) Identifique un ejemplo de modo imperativo si lo hubiere y escríbalo en castellano coherente. (6p)

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