

**Actividad Complementaria:
Catálogos, Farmacopea, Manuales**

Esta actividad debe ser realizada individualmente.

Fecha de entrega: **5 de Octubre de 2016.**

1.- Consultando la página web del Catálogo Sigma, la versión electrónica de la Farmacopea Argentina VII Edición y la monografía del Index Merck que se anexa referida al etanol, complete la siguiente tabla:

	Catálogo Sigma	Farmacopea Argentina VII edición	The Merck Index
Nombre químico			
Sinónimos			
Fórmula molecular			
Número de CAS			
Estructura química			
Composición porcentual			
Peso molecular			
Caracteres generales (organolépticos)			
Punto de fusión			
Punto de ebullición			
Solubilidad			
Categoría terapéutica			
Forma de conservación			
Pictogramas de peligrosidad			
Número de seguridad y riesgo			
Formas de presentación (Tamaño del envase)			
Precios			
Precauciones de uso			
Reacciones de identificación			
Reacciones de valoración			
Usos			

Realice las referencias bibliográficas de la fuente consultada para los puntos 2 a 6 inclusive.

2.- Indique cómo se determina la **densidad** de un líquido, según Farmacopea Argentina VII edición.

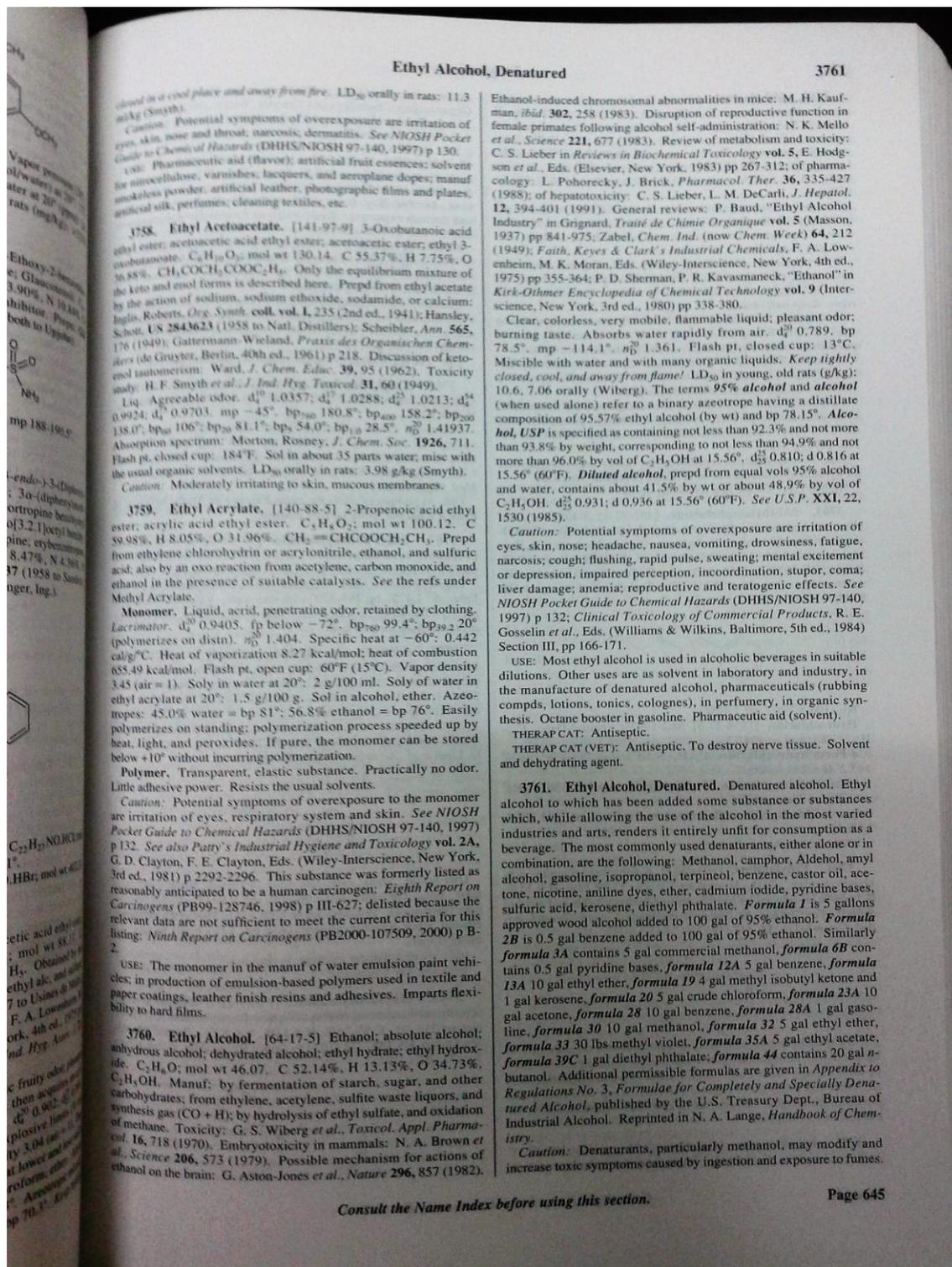
3.- Defina **Agua purificada**, según Farmacopea Argentina VII edición.

4.- Defina **Agua estéril para nebulizar**, según Farmacopea Argentina VII edición. Indique las diferencias con el agua purificada definida en el punto anterior.

5.- Indique cómo se prepara la **Solución de Lugol (SR)**, según Farmacopea Argentina VII edición.

6.- Explique brevemente qué tipo de información encuentra en el Apartado Fitoterápicos de Tercer Volumen de la Farmacopea Argentina VII Ed.

7.- Realice un cuadro comparativo indicando semejanzas y diferencias en el contenido de las monografías de Paracetamol (materia prima) y Paracetamol comprimidos.



Ethyl Alcohol, Denatured

3761

closed in a cool place and away from fire. LD₅₀ orally in rats: 11.3 ml/kg (Smith).

Caution: Potential symptoms of overexposure are irritation of eyes, skin, nose and throat; narcosis; dermatitis. See *NIOSH Pocket Guide to Chemical Hazards* (DHHS/NIOSH 97-140, 1997) p 130.

USE: Pharmaceutical aid (flavor); artificial fruit essences; solvent for nitrocellulose, varnishes, lacquers, and aeroplane dopes; manuf smokeless powder, artificial leather, photographic films and plates, artificial silk, perfumes; cleaning textiles, etc.

3758. Ethyl Acetoacetate. [141-97-9] 3-Oxobutanoic acid ethyl ester; acetoacetic acid ethyl ester; acetoacetic ester; ethyl 3-oxobutanoate. C₈H₁₄O₃; mol wt 130.14. C 55.37%, H 7.75%, O 36.88%. CH₃COCH₂COOC₂H₅. Only the equilibrium mixture of the keto and enol forms is described here. Prep'd from ethyl acetate by the action of sodium, sodium ethoxide, sodamide, or calcium: Inglo, Roberts, *Org. Synth. coll. vol. I*, 235 (2nd ed., 1941); Hansley, Schell, *US 2843623* (1958 to Natl. Distillers); Scheibler, *Ann.* **565**, 176 (1949); Giattmann-Wieland, *Praxis des Organischen Chemikers* (de Gruyter, Berlin, 40th ed., 1961) p 218. Discussion of keto-enol tautomerism: Ward, *J. Chem. Educ.* **39**, 95 (1962). Toxicity study: H. F. Smyth *et al.*, *J. Ind. Hyg. Toxicol.* **31**, 60 (1949).

Liq. Agreeable odor. d₄²⁰ 1.0357; d₄¹⁷ 1.0288; d₄¹⁵ 1.0213; d₄¹⁴ 1.01924; d₄¹³ 0.9703. mp -45°. bp₇₆₀ 180.8°; bp₄₀₀ 158.2°; bp₂₀₀ 138.0°; bp₁₀₀ 106°; bp₅₀ 81.1°; bp₂₅ 54.0°; bp₁₀ 28.5°. n_D²⁰ 1.41937. Absorption spectrum: Morton, Rosney, *J. Chem. Soc.* **1926**, 711. Flash pt. closed cup: 184°F. Sol in about 35 parts water; misc with the usual organic solvents. LD₅₀ orally in rats: 3.98 g/kg (Smyth).

Caution: Moderately irritating to skin, mucous membranes.

3759. Ethyl Acrylate. [140-88-5] 2-Propenoic acid ethyl ester; acrylic acid ethyl ester. C₇H₁₀O₂; mol wt 100.12. C 59.98%, H 8.05%, O 31.96%. CH₂=CHCOOCH₂CH₃. Prep'd from ethylene chlorohydrin or acrylonitrile, ethanol, and sulfuric acid, also by an oxo reaction from acetylene, carbon monoxide, and ethanol in the presence of suitable catalysts. See the refs under Methyl Acrylate.

Monomer. Liquid, acid, penetrating odor, retained by clothing. **Lacriminator.** d₄²⁰ 0.9405. fp below -72°. bp₇₆₀ 99.4°; bp_{30.2} 20° (polymerizes on distn). n_D²⁰ 1.404. Specific heat at -60°: 0.442 cal/g°C. Heat of vaporization 8.27 kcal/mol; heat of combustion 65.49 kcal/mol. Flash pt. open cup: 60°F (15°C). Vapor density 3.45 (air = 1). Sol in water at 20°: 1.5 g/100 g. Sol in alcohol, ether. Azeotropes: 45.0% water = bp 81°; 56.8% ethanol = bp 76°. Easily polymerizes on standing; polymerization process speeded up by heat, light, and peroxides. If pure, the monomer can be stored below +10° without incurring polymerization.

Polymer. Transparent, elastic substance. Practically no odor. Little adhesive power. Resists the usual solvents.

Caution: Potential symptoms of overexposure to the monomer are irritation of eyes, respiratory system and skin. See *NIOSH Pocket Guide to Chemical Hazards* (DHHS/NIOSH 97-140, 1997) p 132. See also *Patty's Industrial Hygiene and Toxicology* vol. 2A, G. D. Clayton, F. E. Clayton, Eds. (Wiley-Interscience, New York, 3rd ed., 1981) p 2292-2296. This substance was formerly listed as reasonably anticipated to be a human carcinogen: *Eighth Report on Carcinogens* (PB99-128746, 1998) p III-627; delisted because the relevant data are not sufficient to meet the current criteria for this listing: *Ninth Report on Carcinogens* (PB2000-107509, 2000) p B-2.

USE: The monomer in the manuf of water emulsion paint vehicles; in production of emulsion-based polymers used in textile and paper coatings, leather finish resins and adhesives. Imparts flexibility to hard films.

3760. Ethyl Alcohol. [64-17-5] Ethanol; absolute alcohol; anhydrous alcohol; dehydrated alcohol; ethyl hydrate; ethyl hydroxide. C₂H₅O; mol wt 46.07. C 52.14%, H 13.13%, O 34.73%. C₂H₅OH. Manuf: by fermentation of starch, sugar, and other carbohydrates; from ethylene, acetylene, sulfite waste liquors, and synthesis gas (CO + H₂) by hydrolysis of ethyl sulfate, and oxidation of methane. Toxicity: G. S. Wiberg *et al.*, *Toxicol. Appl. Pharmacol.* **16**, 718 (1970). Embryotoxicity in mammals: N. A. Brown *et al.*, *Science* **206**, 573 (1979). Possible mechanism for actions of ethanol on the brain: G. Aston-Jones *et al.*, *Nature* **296**, 857 (1982).

Ethanol-induced chromosomal abnormalities in mice: M. H. Kaufman, *ibid.* **302**, 258 (1983). Disruption of reproductive function in female primates following alcohol self-administration: N. K. Mello *et al.*, *Science* **221**, 677 (1983). Review of metabolism and toxicity: C. S. Lieber in *Reviews in Biochemical Toxicology* vol. 5, E. Hodgson *et al.*, Eds. (Elsevier, New York, 1983) pp 267-312; of pharmacology: L. Pohorecky, J. Brick, *Pharmacol. Ther.* **36**, 335-427 (1988); of hepatotoxicity: C. S. Lieber, L. M. DeCarli, *J. Hepatol.* **12**, 394-401 (1991). General reviews: P. Baud, "Ethyl Alcohol Industry" in Grignard, *Traité de Chimie Organique* vol. 5 (Masson, 1937) pp 841-975; Zabel, *Chem. Ind.* (now *Chem. Week*) **64**, 212 (1949); Faith, Keyes & Clark's *Industrial Chemicals*, F. A. Lowenheim, M. K. Moran, Eds. (Wiley-Interscience, New York, 4th ed., 1975) pp 355-364; P. D. Sherman, P. R. Kavasmancik, "Ethanol" in *Kirk-Othmer Encyclopedia of Chemical Technology* vol. 9 (Interscience, New York, 3rd ed., 1980) pp 338-380.

Clear, colorless, very mobile, flammable liquid; pleasant odor; burning taste. Absorbs water rapidly from air. d₄²⁰ 0.789, bp 78.5°. mp -114.1°. n_D²⁰ 1.361. Flash pt. closed cup: 13°C. Miscible with water and with many organic liquids. **Keep tightly closed, cool, and away from flame!** LD₅₀ in young, old rats (g/kg): 10.6, 7.06 orally (Wiberg). The terms **95% alcohol** and **alcohol** (when used alone) refer to a binary azeotrope having a distillate composition of 95.57% ethyl alcohol (by vol) and not more than 93.8% by weight, corresponding to not less than 94.9% and not more than 96.0% by vol of C₂H₅OH at 15.56°, d₄¹⁵ 0.810, d 0.816 at 15.56° (60°F). **Diluted alcohol**, prep'd from equal vols 95% alcohol and water, contains about 41.5% by wt or about 48.9% by vol of C₂H₅OH. d₄²⁰ 0.931; d 0.936 at 15.56° (60°F). See *U.S.P.* **XXI**, 22, 1530 (1985).

Caution: Potential symptoms of overexposure are irritation of eyes, skin, nose; headache, nausea, vomiting, drowsiness, fatigue, narcosis; cough; flushing, rapid pulse, sweating; mental excitement or depression, impaired perception, incoordination, stupor, coma; liver damage; anemia; reproductive and teratogenic effects. See *NIOSH Pocket Guide to Chemical Hazards* (DHHS/NIOSH 97-140, 1997) p 132; *Clinical Toxicology of Commercial Products*, R. E. Gosselin *et al.*, Eds. (Williams & Wilkins, Baltimore, 5th ed., 1984) Section III, pp 166-171.

USE: Most ethyl alcohol is used in alcoholic beverages in suitable dilutions. Other uses are as solvent in laboratory and industry, in the manufacture of denatured alcohol, pharmaceuticals (rubbing compds, lotions, tonics, colognes), in perfumery, in organic synthesis. Octane booster in gasoline. Pharmaceutical aid (solvent).

THERAP CAT: Antiseptic.

THERAP CAT (VET): Antiseptic. To destroy nerve tissue. Solvent and dehydrating agent.

3761. Ethyl Alcohol, Denatured. Denatured alcohol. Ethyl alcohol to which has been added some substance or substances which, while allowing the use of the alcohol in the most varied industries and arts, renders it entirely unfit for consumption as a beverage. The most commonly used denaturants, either alone or in combination, are the following: Methanol, camphor, Aldehol, amyl alcohol, gasoline, isopropanol, terpineol, benzene, castor oil, acetone, nicotine, aniline dyes, ether, cadmium iodide, pyridine bases, sulfuric acid, kerosene, diethyl phthalate. **Formula 1** is 5 gallons approved wood alcohol added to 100 gal of 95% ethanol. **Formula 2B** is 0.5 gal benzene added to 100 gal of 95% ethanol. Similarly **formula 3A** contains 5 gal commercial methanol, **formula 6B** contains 0.5 gal pyridine bases, **formula 12A** 5 gal benzene, **formula 13A** 10 gal ethyl ether, **formula 19** 4 gal methyl isobutyl ketone and 1 gal kerosene, **formula 20** 5 gal crude chloroform, **formula 23A** 10 gal acetone, **formula 28** 10 gal benzene, **formula 28A** 1 gal gasoline, **formula 30** 10 gal methanol, **formula 32** 5 gal ethyl ether, **formula 33** 30 lbs methyl violet, **formula 35A** 5 gal ethyl acetate, **formula 39C** 1 gal diethyl phthalate; **formula 44** contains 20 gal *n*-butanol. Additional permissible formulas are given in *Appendix to Regulations No. 3, Formulae for Completely and Specially Denatured Alcohol*, published by the U.S. Treasury Dept., Bureau of Industrial Alcohol. Reprinted in N. A. Lange, *Handbook of Chemistry*.

Caution: Denaturants, particularly methanol, may modify and increase toxic symptoms caused by ingestion and exposure to fumes.