



Bite of Science:

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Resource Sheet

Background - Quality Assurance and Laboratory Manager

The knowledge and skills needed to perform this position are typically acquired through a Bachelor's degree in chemistry and/or biology along with five or more years experience in a laboratory or quality assurance/control department. Experience in the Ethanol industry is desirable, specifically knowledge and understanding of the grinding, cook and fermentation processes. The incumbent must also possess strong and effective supervisory and human relation skills in dealing with subordinates as well as internal and external contacts. Strong data analysis and personal computer skills, utilizing current commercial software programs (e.g. word processing, spreadsheets, databases, and statistical) are also essential.

Background - Laboratory Technician

The knowledge and skills needed to perform this position are typically acquired through completion of a high school diploma or its equivalent. The incumbent should also have a basic working knowledge or high degree of interest in chemistry and analytical laboratory work in general. The incumbent should possess cursory working knowledge relating to statistics, GLP procedures and analytical instrumentation. Computer literacy is crucial, with an emphasis on spreadsheet generation and use. Accuracy and attention to detail, a keen sense of observation and the ability to proactively communicate both verbally and in written reports is also required.

Supporting Content

- Green Engineering: More on molecular sieve dehydration
<http://www.greeneng.it/GEUNIT900/GEUNIT900temp2.html>
- ICM Interactive Ethanol Process
<http://www.icmnc.com/innovation/ethanol/ethanol-production-process.html>
- Soap Making in Chemistry Class
<http://sanmccarron.blogspot.com/2012/01/soapmaking-in-chemistry-class.html>
- <http://www.EthanolRFA.org>
- <http://www.andersonsinc.com>
- See Also: Leaf Chromatography and Marker Chromatography
- Food Science TV: Fermentation, Maillard Reaction, Protein Denaturation
<http://www.youtube.com/user/foodsciencetv?feature=watch>

Indispensible Texts

The Alcohol Textbook 5th Edition, Ingledew, Kelsall, Austin and Kluhspies, ed.

Yeast Physiology and Biotechnology, Graeme M. Walker

Corn Chemistry and Technology 2nd Edition, Pamela J. White and Lawrence A. Johnson, ed.

Distillers Grains Production, Properties, and Utilization, Keshun Liu and Kurt A. Rosentrater

The Power Handbook 2nd Edition, Editors of Power Magazine (Not indispensable, but still very useful)