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Expanding GSK's solvent selection guide â “ embedding selection starting at medicinal chemistry

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Abstract

Solvents make a large contribution to the environmental impact of manufacturing pharmaceuticals (API), as well as playing an important role in other chemical industries, with millions of tonnes used annually. GlaxoSmithKline (GSK) has previously reported on the both the development of a Chemical Process Safety (CPS) solvent life cycle inventory and assessment information. The GSK solvent selection guide is enhanced by:

â € Revising the assessments of factors that impact process safety, separating reactive

â € More than doubling the number of solvents in the guide, to a total of 110 from the

â € Adding a customised solvent selection guide appropriate for medicinal chemists

The new GSK solvent selection guide enables GSK scientists to objectively assess so
solvents brought to market as â ~greenerâ™ alternatives truly represent a more sust
addressing a single issue associated with sustainability.

GSK Solvent Selection Guide		
Few issues (1/10)	Some issues (2/10)	Major issues (3/10)
Chlorinated ... before using chlorinated solvents, have you considered TMSI, Isopropyl acetate, ethyl acetate, 2-Methyl THF or Dimethyl Carbonate?		Major issues Dichloromethane™ Carbon tetrachloride™ Chloroform™ 1,1-Dichloroethane™
Greenest Option Water (1/10)		1-Methylcyclohexane™
Alcohols 1-Butanol (1/10) 2-Butanol (1/10)	Ethanol (1/10) 1-Butanol (1/10) Methanol (1/10)	
Esters 1-Butyl acetate (1/10) Isopropyl acetate (1/10) Propyl acetate (1/10) Dimethyl Carbonate (1/10)	Ethyl acetate (1/10) Methyl acetate (1/10)	
Ketones	Methyl isobutyl ketone (1/10) Acetone (1/10)	Methyl ethyl ketone
Aromatics	p-Xylene (1/10) Toluene™ (1/10)	Benzene™
Hydrocarbons	Isooctane (1/10) Cyclohexane (1/10) Heptane (1/10)	Petroleum spirit™ 2-Methylpentane Hexane
Ethers	1-Butyl methyl ether (1/10) 2-Methyl THF (1/10) Cyclopentyl methyl ether (1/10)	1,2-Dioxane™ 1,4-Dioxane™ Tetrahydrofuran™ Diethyl ether™ Diisopropyl ether™ Di-n-butyl ether™ Di-n-butyl carbonate™ Di-n-butyl succinate™ Acetone
Dipolar aprotics	Dimethyl sulfoxide (1/10)	

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The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The document provides a detailed list of items that should be tracked, such as inventory levels, supplier payments, and customer orders. It also outlines the procedures for reconciling accounts and identifying discrepancies. The second part of the document focuses on the analysis of the recorded data. It describes various methods for interpreting the information, such as comparing current performance with historical trends and industry benchmarks. The document also discusses the implications of the data for decision-making, highlighting the need for timely and accurate information to support strategic planning. Finally, the document concludes with a summary of the key findings and recommendations for future actions. It stresses the importance of continuous monitoring and reporting to ensure the long-term success of the organization.

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The second part of the document focuses on the role of the accounting department in providing accurate and timely financial information to management. It highlights the need for clear communication and collaboration between the accounting team and other departments. The document describes the various reports and statements that are prepared, including the balance sheet, income statement, and cash flow statement. It also discusses the importance of analyzing these reports to identify trends and make informed decisions.

The third part of the document addresses the challenges of managing a large volume of transactions and the need for efficient systems and processes. It discusses the use of accounting software and the importance of regular backups and security measures. The document also provides tips for streamlining the accounting process and reducing the risk of errors. Finally, it concludes with a summary of the key points and a call to action for all employees to adhere to the established procedures and maintain the highest standards of accuracy and integrity.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial statements. This includes not only sales and purchases but also expenses, income, and transfers between accounts.

Next, the document outlines the process of reconciling bank statements with the company's records. This involves comparing the bank's record of transactions with the company's ledger to identify any discrepancies. Common reasons for differences include timing issues, such as deposits in transit or outstanding checks, as well as potential errors in recording or bank charges.

The document then addresses the preparation of the income statement. It explains how the data from the ledger is used to calculate the company's net income for a specific period. Key components include total revenue, cost of goods sold, and operating expenses. The final result is the net profit, which is a crucial indicator of the company's financial health.

Finally, the document discusses the importance of reviewing and auditing the financial records. Regular audits help to detect and correct errors, prevent fraud, and ensure that the financial statements are accurate and reliable. It also highlights the role of external auditors in providing an independent opinion on the company's financial performance.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry, no matter how small, should be recorded to ensure the integrity of the financial data. This includes not only sales and purchases but also expenses and income. The text suggests that a consistent and thorough record-keeping system is essential for identifying trends and making informed decisions.

Next, the document addresses the issue of budgeting. It explains that a well-defined budget helps in controlling costs and maximizing resources. By setting a clear financial plan, individuals and organizations can avoid overspending and ensure that their financial goals are met. The text provides practical advice on how to create a budget that is realistic and adaptable to changing circumstances.

The third section focuses on the importance of regular financial reviews. It states that periodic assessments of the financial situation allow for the identification of areas where adjustments may be needed. This process involves comparing actual performance against the budget and analyzing the reasons for any variances. The document encourages a proactive approach to financial management, where potential issues are addressed before they become significant problems.

Finally, the document concludes by highlighting the long-term benefits of sound financial practices. It notes that consistent record-keeping, budgeting, and regular reviews contribute to overall financial stability and growth. By following these principles, individuals and organizations can build a strong financial foundation that supports their long-term objectives.

The first part of the document discusses the importance of maintaining accurate records in a business setting. It highlights how proper record-keeping can help in decision-making, legal compliance, and financial management. The text emphasizes that records should be organized, up-to-date, and easily accessible to relevant personnel.

Next, the document addresses the challenges of data management in the digital age. With the increasing volume of data generated by various sources, businesses face the task of storing, securing, and analyzing this information effectively. The text suggests implementing robust data management systems and protocols to ensure data integrity and security.

The third section focuses on the role of technology in streamlining business operations. It explores how automation and digital tools can reduce manual errors, improve efficiency, and enhance customer service. The document encourages businesses to invest in technology that aligns with their strategic goals and operational needs.

Finally, the document concludes by emphasizing the importance of continuous learning and adaptation. In a rapidly changing business environment, organizations must stay updated on the latest trends and technologies to remain competitive. The text encourages a culture of innovation and ongoing professional development for all employees.

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