

Comparison of Different Linear Regression Formulas for Size Estimation of Plasmids in Bacteria

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Abstract With *E. coli* V517 harboured plasmids of different sizes as a reference strain, the suitable linear regression formulas used for molecular weight estimation of bacterial plasmids are reported. From data of plasmid detection in *E. coli* V517 to estimate MW of plasmid three linear regression formulas were compared. They were $\log MW = A + B(D)$, $\log MW = A + B(RM)$, and $\log MW = A + B(\log RM)$. In which MW represented molecular weight of plasmid, D represented migration distance, and RM represented relative mobility of plasmid DNA bands. According to the correlation coefficient (r) of linear regression, the molecular weight of plasmids in *E. coli* V517 estimated by LR formulas described above, and the similar RM values obtained in 27 experiments, it can be proposed that the formula: $\log MW = A + B(RM)$ is the suitable formula for size estimation of bacterial plasmids. It is better than the traditional one: $\log MW = A + B(\log RM)$.

Key word Plasmid; Size estimation; *E. coli* V517; Linear regression formula

【文摘 037】溴甲癸铵的合成 莫芬珠,周 蓉.
中国医药工业杂志,1995,26(6)

溴甲癸铵(商品名 Deciquam),化学名为溴化 *N*,*N*-二甲基-*N*,*N*-二癸基铵,是一种较好的双长链季铵类消毒剂。国内尚未见试制报告。我们参考类似合成工艺,加以改进,其特点在于先制得叔胺(1,癸基二甲胺),再使其与化学计算量的1-溴癸烷作用,顺利地得到成品季铵(3,溴化 *N*,*N*-二癸基铵),收率高。产品纯,操作也较方便。

【文摘 038】抗心律失常药物的研究 I —— 苯丙二醇胺类化合物的合成及其活性测定 王如斌,彭司勋,华维一. 中国药物化学杂志,1995;5(1):1

根据 β -阻断剂的化学结构,设计合成了 12 个苯丙二醇胺类化合物,其中 11 个未见文献报道,它们

的化学结构均经红外光谱、核磁共振、质谱和元素分析确证,用氯仿诱发小鼠心律失常的模型进行试验表明, I₁, I₂, I₃, I₇ 和 I₁₅ 5 个化合物具有明显的抗心律失常活性。

【文摘 039】抗心律失常药物的研究 II —— 1-对硝基(或氨基)苯基-3-正丁胺基-1,2-丙二醇的合成 王如斌,彭司勋,华维一. 中国药物化学杂志,1995;5(2),140

设计合成了两个取代苯丙二醇胺类化合物,均未见文献报道,其化学结构经红外光谱、核磁共振、质谱和元素分析确证。用氯仿诱发小鼠心律失常的模型进行试验表明,对氨基苯丙二醇丁胺具有显著的抗心律失常活性。