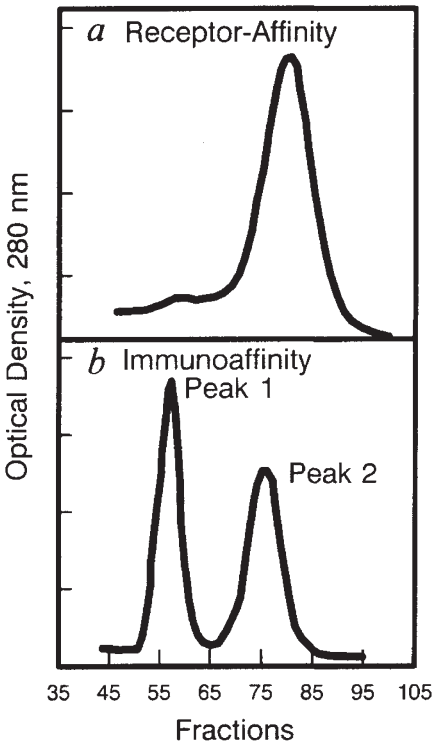

Fig. 2 Gel filtration profiles of receptor- and immunoaffinity-purified rIL-2[5]. A 2.6 × 35 cm column is packed with superfine Sephadex G-50. The mobile phase used was 50 mM sodium acetate containing 0.2 M sodium chloride, 5 mgml^{-1} mannitol, *p*H 3.5. Eleven mg protein in 3 ml buffer was applied to the column at a flow rate of 0.5 m min^{-1} and 10-minute fractions were collected.

degrees of biological activity and renaturation state.

The widespread commercial use of RAC depends upon considerable reductions in the production costs of soluble receptors. Good Manufacturing Practices criteria for the use of the receptors also have yet to be established.

Biotechnology is on the verge of producing soluble receptors of other biomolecules such as interleukin-1[11], gamma-interferon and tumour necrosis factor. We believe that in the near future receptor-affinity chromatography will become an established method for the purification of high-value recombinant proteins. □

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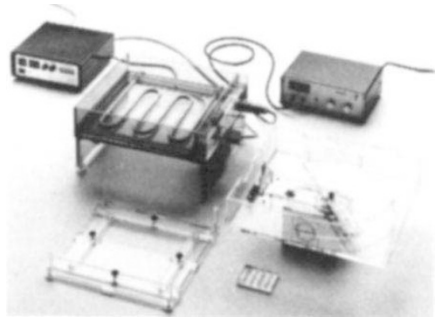
Genes and things

A handful of reagents and hardware for 'genetically engineering' cells are offered this week, including competent cells, a labelled nucleotide and a restriction mapping kit.

THE German company Biometra has come up with a new slant on **pulsed field gel electrophoresis** techniques (*Reader Service No. 101*). Biometra's Rotaphor electrophoresis apparatus has rotating



Biometra's Rotaphor electrophoresis apparatus.

electrodes which are curved to generate a homogeneous field between them. A stepping motor, controlled by a microprocessor-based unit, alters the orientation of the electric field at arbitrary predetermined angles at set intervals of between 5 and 9,999 seconds. The company says DNA molecules of up to 10^6 base pairs can be separated on a 20 × 20 cm agarose gel in 24 hours, without lane broadening and fanning.

ICN Biomedicals offers ^{35}S-labelled L-cysteine for ***in vitro* translation** using rabbit reticulocyte lysate, wheat germ lysate and RNA-dependent reticulocyte lysate systems (*Reader Service No. 102*). The reagent can also be used to label mammalian cells in culture and proteins *in vivo*. ICN Biomedicals sells the compound as a 1 mCi aqueous solution containing 10 mM 2-mercaptoethanol in a multi-purpose vial, for the introductory price of $95 (US), valid until the end of the year.

Clontech has introduced a line of organic reagents to automate the **modification of synthetic oligonucleotides** in preparation for non-isotopic labelling (*Reader Service No. 103*). The line includes $75-90 (US) C_n AminoModifiers, $85 (US) AminoModifier II and $75 (US) C_6 ThiolModifier for the attachment of a primary, aliphatic amine or sulfhydryl group to the 5′ terminus or an internal position of a DNA sequence. The products come as CE-phosphoramidites which plug in to the fifth port of a DNA synthesizer, along with the standard G, A, T and C phosphoramidites.

BRL says its new MAX Efficiency DH5α5F′IQ **competent cells** deliver the highest transformation efficiency available for M13/phagemid cloning (*Reader Service No. 104*). The competent cells are supplied with lawn cells and yield > 1 × 10^8 plaque-forming units per microgram of monomer M13mp19 RF DNA or > 3 × 10^8 transformants per microgram pBR322 DNA, says the company. The strain contains a kanamycin resistance marker to prevent loss of the F′ episome, and the cells overproduce the *lac* repressor protein, making them useful for cloning into expression vectors.

Promega has added the *Sfi*I high-resolution **mapping system** to its line of molecular biology products (*Reader Service No. 105*). Promega's LambdaGEM-11 genomic cloning vector possesses *Sfi*I restriction sites flanking bacteriophage T7/SP6 RNA polymerase promoters and a multiple cloning region. The *Sfi*I sites allow most inserts to be excised as a single fragment, because the 8-base restriction site occurs infrequently in genomic DNA. Promega has designed the *Sfi*I sites in an asymmetric fashion, so that radiolabelled linkers complementary to either terminus can be separately ligated to the *Sfi*I excised genomic DNA, and a restriction map can be determined by partial digestion with a frequent-cutting restriction endonuclease. The company says the mapping resolution of the method is much greater than conventional *cos* site oligo-labelling because only the ends of the insert are labelled, instead of the 20 kilobase and 9 kilobase arms of the vector. The complete system performs 200 reactions, and sells for $265 (US). □

These notes are compiled by Carol Ezzell from information provided by the manufacturers. To obtain further details about these products, use the reader service card bound inside the journal. Prices quoted are sometimes nominal, and apply only within the country indicated.