TABLE OF CONTENTS

	Page
INTRODUCTION	1
1. Implementation of BEP	1
2. Scientific and technical value	6
3. Interest for the Community	8
4. The Biotechnology Action Programme	11
5. Role of the Advisory Committees	12
SUMMARY REVIEWS OF SCIENTIFIC ACHIEVEMENTS BY RESEARCH SECTORS	17
l. Sector l : Second generation bioreactors	19
2. Sector 2.1 : Genetic engineering of virus and cellular genes important in animal husbandry	33
3. Sectors 2.2 + 3 : Genetic engineering of microorganisms important for agro-food industries	45
4. Sector 4 : Genetic engineering of plants and micro- organisms important for agriculture	59
COORDINATION ACTIVITIES	83
1. Scientific meetings	84
2. Visits to laboratories	100
3. Publications and reports	102



	Page
FINAL REPORTS	107
from the laboratories participating in the research programme	
 Development of second generation bioreactors (multi- enzymatic, multiphase or requiring a co-factor) for detoxification and for industrial applications including agro-food applications. 	109
 Improved production, by means of biomolecular engineering methods, of substances for: 	297
animal husbandry (particularly vaccines and hormones),agro-food industries.	
2.1 Animal husbandry	299
2.2 Agro-food industries	451
 Upgrading of plant products, particularly ligno-cellulose, by means of biomolecular engineering methods. 	559
4. Improvement, by means of genetic engineering, of plants and microorganisms which play an important role in agriculture.	683
 Development of methods for detecting contamination and for the assessment of possible risks associated with applications of biomolecular engineering in agriculture and industry. 	1107
INDEXES	
1. Index of project leaders	1127
2. Index of keywords	1129
3. Index of cities	1155
4. Index of contract numbers	1161