

MINISTÉRIO DA CIÊNCIA E TECNOLOGIA  
[Ministry of Science and Technology]  
COMISSÃO TÉCNICA NACIONAL DE BIOSSEGURANÇA, CTNBio  
[National Technical Biosafety Committee – CTNBio]  
EXECUTIVE SECRETARIAT  
**ABSTRACTS OF TECHNICAL OPINIONS No. 261 to 470/2004**

The chairman of National Technical Biosafety Committee – CTNBio, in the use of the attributions vested in him, in compliance with Article 2, numeral XIII, Decree No. 1,752, of December 20, 1995, makes public that in 84 Ordinary Meeting held on December 09, 2004, the CTNBio assessed and issued Preliminary Conclusive Technical Opinions for the following process:

**Process No: °: 01200.003743/2004-80**

Applicant: Uniscience do Brasil

CNPJ [National Register of Legal Entities]: 64.858.525/2001-45

Address: Av. Cândido Portinari, 933/937 – CEP [zip code]: 05114-001 – São Paulo (SP) – Phone: (11) 3622-2320 – Fax: (11) 3622-2323. Subject: Application of Preliminary Conclusive Technical Opinion for the import and marketing of enzymes.

Previous Abstract: 266/04 published in D.O.U [Federal Official Gazette] No. 224 on November 23, 2004, Section 3, pg. 8.

**Decision: GRANTED**

Summary: The CTNBio, after assessing the process concerning the application of Conclusive Technical Opinion for the import and marketing of enzymes produced from genetically modified microorganisms and destined to clinical research and to the experimental laboratory use, has concluded for the GRANT. The enzymes are purified and their respective donor organisms and number of Conclusive Technical Opinion are listed in the table below:

266/04 published in D.O.U [Federal Official Gazette] No. 224 on November 23, 2004, Section 3, pg. 8. The CTNBio, after assessing the process concerning the application of Conclusive Technical Opinion for the import and marketing of enzymes produced from genetically modified microorganisms and destined to clinical research and to the experimental laboratory use, has concluded for the GRANT. The enzymes are purified and their respective donor organisms and number of Conclusive Technical Opinion are listed in the table below:

Number	<i>Donor Species</i>	Name of the Recombinant Enzyme:
261/2004	<i>Acetobacter aceti</i>	<i>Aat II</i>

262/2004	<i>Acinetobacter calcoaceticus M4</i>	<i>AccI</i>
263/2004	<i>Acinetobacter calcoaceticus M4</i>	<i>Acl I</i>
264/2004	<i>Acinetobacter calcoaceticus (S.K. Degtyarev).</i>	<i>Acu I</i>
265/2004	<i>Anabaena flos-aquae (CCAP 1403/13f)</i>	<i>Afl II</i>
266/2004	<i>Anabaena flos-aquae (CCAP 1403/13f)</i>	<i>Afl III</i>
267/2004	<i>Ruegeria gelatinovora (ATCC 25655)</i>	<i>Age I</i>
268/2004	<i>Aeromonas hydrophila (C. Polisson)</i>	<i>Ahd I</i>
269/2004	<i>Arthrobacter luteus (ATCC 21606)</i>	<i>Alu I</i>
270/2004	<i>Acinetobacter lwoffii (R. Morgan)</i>	<i>Alw I</i>
271/2004	<i>Acetobacter pasteurianus sub. pasteurianus (ATCC 9432)</i>	<i>Apa I</i>
272/2004	<i>Acetobacter pasteurianus sub. pasteurianus (ATCC 9432)</i>	<i>Apa L I</i>
273/2004	<i>Aeropyrum pernix K1 (ATCC 700893)</i>	<i>ApeK I</i>
274/2004	<i>Arthrobacter protophormiae (C. Polisson)</i>	<i>Apo I</i>
275/2004	<i>Arthrobacter species (R. Morgan)</i>	<i>Asc I</i>
276/2004	<i>Aquaspirillum serpens (ATCC 12638)</i>	<i>Ase I</i>
277/2004	<i>Arthrobacter species (S.K. Degtyarev)</i>	<i>AsiS I</i>
278/2004	<i>Anabaena variabilis (ATCC 27892)</i>	<i>Ava I</i>
279/2004	<i>Anabaena variabilis (ATCC 27892)</i>	<i>Ava II</i>
280/2004	<i>Anabaena variabilis UW (E. Rosenvold)</i>	<i>Avr II</i>
281/2004	<i>Bacillus amyloliquefaciens H (ATCC 49763)</i>	<i>BamH I</i>
282/2004	<i>Bacillus aneurinolyticus (IAM 1077)</i>	<i>Ban I</i>
283/2004	<i>Bacillus brevis (ATCC 9999)</i>	<i>Bbv I</i>
284/2004	<i>Bacillus brevis (L. Ge)</i>	<i>BbvC I</i>
285/2004	<i>Bacteroides caccae (H. Kong)</i>	<i>Bcc I</i>
286/2004	<i>Bacillus coagulans (H. Kong)</i>	<i>Bcg I</i>
287/2004	<i>Bacillus caldolyticus (A. Atkinson)</i>	<i>Bcl I</i>
288/2004	<i>Bacillus globigii (ATCC 49760)</i>	<i>Bgl I</i>
289/2004	<i>Bacillus globigii (ATCC 49760)</i>	<i>Bgl II</i>

290/2004	<i>Bacillus lentus</i> (C. Polisson)	<i>Blp I</i>
291/2004	<i>E. coli</i> com plasmideos <i>pBpu10 IA e pBpu10 IB</i> (S.K. Degtyarev)	<i>Bpu 10 I</i>
292/2004	<i>Bacillus stearothermophilus</i> 6-55 (Z. Chen)	<i>Bsa I</i>
293/2004	<i>Bacillus stearothermophilus</i> G668 (Z. Chen)	<i>BsaA I</i>
294/2004	<i>Bacillus species R</i> (CAMB 2669)	<i>BseR I</i>
295/2004	<i>Bacillus species</i> 2521 (C. Nkenfou)	<i>BseY I</i>
296/2004	<i>Bacillus species</i> (D. Clark)	<i>BsiW I</i>
297/2004	<i>Bacillus species</i> (R. Morgan)	<i>Bsl I</i>
298/2004	<i>Bacillus stearothermophilus</i> NUB 36 (N. Welker)	<i>Bsm I</i>
299/2004	<i>Bacillus stearothermophilus</i> B61 (Z. Chen)	<i>BsmB I</i>
300/2004	<i>Bacillus stearothermophilus</i> JN2091 (D. Clark)	<i>BsoB I</i>
301/2004	<i>Bacillus species</i> (H. Kong)	<i>BspE I</i>
302/004	<i>Bacillus species H</i> (D. Hall)	<i>BspH I</i>
303/2004	<i>Bacillus species M</i> (R. Morgan)	<i>BspM I</i>
304/2004	<i>Bacillus stearothermophilus</i> CPW16 (Z. Chen)	<i>BsrF I</i>
305/2004	<i>Bacillus stearothermophilus</i> H3 (N. Welker)	<i>BssH II</i>
306/2004	<i>Bacillus stearothermophilus</i> S719 (Z. Chen)	<i>BssS I</i>
307/2004	<i>Bacillus stearothermophilus</i> ET (N. Welker)	<i>BstE II</i>
308/2004	<i>Bacillus stearothermophilus</i> Y406 (Z. Chen)	<i>BstY I</i>
309/2004	<i>Caryophanon latum</i> L (ATCC 49862)	<i>Cla I</i>
310/2004	<i>Citrobacter species</i> 2144 (C. Nkenfou)	<i>CspC I</i>
311/2004	<i>Chlorella virus</i> PBCV-1 (J.L. Van Etten)	<i>CviA II</i>
312/2004	<i>Desulfovibrio desulfuricans</i> (NCIB 83120)	<i>Dde I</i>
313/2004	<i>Diplococcus pneumoniae</i> G41 (S. Lacks)	<i>Dpn I</i>

314/2004	<i>Diplococcus pneumoniae G41 (S. Lacks)</i>	<i>Dpn II</i>
315/2004	<i>Deinococcus radiophilus (ATCC 27603)</i>	<i>Dra I</i>
316/2004	<i>Deinococcus radiophilus (ATCC 27603)</i>	<i>Dra III</i>
317/2004	<i>Enterobacter aerogenes (N. Brown)</i>	<i>Eae I</i>
318/2004	<i>Enterobacter agglomerans (R. Morgan)</i>	<i>Eag I</i>
319/2004	<i>Enterobacter aerogenes (C. Polisson)</i>	<i>Ear I</i>
320/2004	<i>E. coli H709c (I. Orskov)</i>	<i>Eco0109 I</i>
321/2004	<i>E. coli EcoP15 I res-mod genes in plasmid pSH1180 (DN. Rao)</i>	<i>EcoP15 I</i>
322/2004	<i>E. coli RY13 (R.N. Yoshimori)</i>	<i>EcoR I</i>
323/2004	<i>E. coli com plasmideo J62 pLG74 (L.l. Glatman)</i>	<i>EcoR V</i>
324/2004	<i>Flavobacterium aquatili (S.K. Degtyarev)</i>	<i>Fau I</i>
325/2004	<i>Fusobacterium nucleatum 4H (M. Smith)</i>	<i>Fnu4H I</i>
326/2004	<i>Flavobacterium okeanokoites (IFO 12536)</i>	<i>Fok I</i>
327/2004	<i>Frankia species Eul1b (NRRL 18528)</i>	<i>Fse I</i>
328/2004	<i>Fischerella species (ATCC 29114)</i>	<i>Fsp I</i>
329/2004	<i>Haemophilus aegypticus (ATCC 11116)</i>	<i>Hae II</i>
330/2004	<i>Haemophilus aegypticus (ATCC 11116)</i>	<i>Hae III</i>
331/2004	<i>Haemophilus gallinarum (ATCC 14385)</i>	<i>Hga I</i>
332/2004	<i>Haemophilus haemolyticus (ATCC 10014)</i>	<i>Hha I</i>
333/2004	<i>Haemophilus influenzae Rc (ATCC 49699)</i>	<i>Hinc II</i>
334/2004	<i>Haemophilus influenzae Rd (ATCC 51907)</i>	<i>Hind III</i>
335/2004	<i>Haemophilus influenzae Rf (ATCC 49824)</i>	<i>Hinf I</i>
336/2004	<i>Haemophilus influenzae P1 (S. Shen)</i>	<i>HinP1 I</i>
337/2004	<i>Haemophilus parainfluenzae (ATCC 49669)</i>	<i>Hpa I</i>
338/2004	<i>Haemophilus parainfluenzae (ATCC</i>	<i>Hpa II</i>

	49669)	
339/2004	<i>Haemophilus parahaemolyticus</i> (ATCC 49700)	<i>Hph I</i>
340/2004	<i>Helicobacter pylori</i> J99 (R.A. Alm)	<i>Hpy99 I</i>
341/2004	<i>Helicobacter pylori</i> 188 (S.A. Thompson)	<i>Hpy188 I</i>
342/2004	<i>Helicobacter pylori</i> 188 (S.A. Thompson)	<i>Hpy188 III</i>
343/2004	<i>Helicobacter pylori</i> CH4 (S.A. Thompson)	<i>HpyCH4 III</i>
344/2004	<i>Helicobacter pylori</i> CH4 (S.A. Thompson)	<i>HpyCH4 IV</i>
345/2004	<i>Helicobacter pylori</i> CH4 (S.A. Thompson)	<i>HpyCH4 V</i>
346/2004	<i>Kluyvera ascorbata</i> (C. Polisson)	<i>Kas I</i>
347/2004	<i>Klebsiella pneumoniae</i> OK8 (ATCC 49790)	<i>Kpn I</i>
348/2004	<i>Moraxella bovis</i> (ATCC 10900)	<i>Mbo I</i>
349/2004	<i>Moraxella bovis</i> (ATCC 10900)	<i>Mbo II</i>
350/2004	<i>Mycoplasma fermentas</i> (N.F. Halden)	<i>Mfe I</i>
351/2004	<i>Micrococcus luteus</i> (IFO 12992)	<i>Mlu I</i>
352/2004	<i>Micrococcus lylae</i> (NBL 2048)	<i>Mly I</i>
353/2004	<i>Methylophilus methylotrophus</i>	<i>Mme</i>
354/2004	<i>Moraxella nonliquefaciens</i> (ATCC 17953)	<i>Mnl I</i>
355/2004	<i>Micrococcus species</i> (C. Polisson)	<i>Msc I</i>
356/2004	<i>Micrococcus species</i> (R. Morgan)	<i>Mse I</i>
357/2004	<i>Moraxella species</i> (ATCC 49670)	<i>Msp I</i>
358/2004	<i>Moraxella species</i> (S.K. Degtyarev)	<i>MspA1 I</i>
359/2004	<i>Methanobacterium wolfeii</i> (DSM 2970)	<i>Mwo I</i>
360/2004	<i>Nocardia aerocolonigenes</i> (ATCC 23870)	<i>Nae I</i>
361/2004	<i>Neisseria cinerea</i> (NRCC 31006)	<i>Nci I</i>
362/2004	<i>Nocardia corallina</i> (ATCC 19070)	<i>Nco I</i>
363/2004	<i>Neisseria denitrificans</i> (NRCC 31009)	<i>Nde I</i>

364/2004	<i>Neisseria gonorrhoeae</i> MS11 (M. So)	<i>NgoM IV</i>
365/2004	<i>Neisseria mucosa heidelbergensis</i> (ATCC 25999)	<i>Nhe I</i>
366/2004	<i>Neisseria lactamica</i> (NRCC 2118)	<i>Nla III</i>
367/2004	<i>Neisseria lactamica</i> (NRCC 2118)	<i>Nla IV</i>
368/2004	<i>Nocardia otitidis-caviarum</i> (ATCC 14630)	<i>Not I</i>
369/2004	<i>Neisseria sicca</i> (ATCC 29256)	<i>Nsi I</i>
370/2004	<i>Nostoc species C</i> (ATCC 29411)	<i>Nsp I</i>
371/2004	<i>Pseudomonas alcaligenes</i> (C. Polisson)	<i>Pac I</i>
372/2004	<i>Pseudomonas aeruginosa</i> PA0303 pMG7 (R.V.)	<i>PaeR7 I</i>
373/2004	<i>Pseudomonas fluorescens</i> (R. Morgan)	<i>PflM I</i>
374/2004	<i>Pyrococcus horikoshii</i> OT3 (Y. Kawarabayasi).	<i>Pho I</i>
375/2004	<i>Pseudomonas lemoignei</i> (R. Morgan)	<i>Ple I</i>
376/2004	<i>Pseudomonas mendocina</i> (B. Zhou)	<i>Pme I</i>
377/2004	<i>Pseudomonas putida</i> (R. Morgan)	<i>PpuM I</i>
378/2004	<i>Plesiomonas shigelloides</i> (T. Shimada)	<i>PshA I</i>
379/2004	<i>Pyrococcus species strain GI-H</i> (R. Morgan)	<i>PspG I</i>
380/2004	<i>Providencia stuartii</i> 164 (ATCC 49762)	<i>Pst I</i>
381/2004	<i>Proteus vulgaris</i> (ATCC 13315).	<i>Pvu II</i>
382/2004	<i>Rhodopseudomonas sphaeroides</i> (S. Kaplan)	<i>Rsa I</i>
383/2004	<i>Streptomyces achromogenes</i> (ATCC 12767)	<i>Sac I</i>
384/2004	<i>Streptomyces achromogenes</i>	<i>Sac II</i>
385/2004	<i>Streptomyces albus</i> G (ATCC 49789)	<i>Sal I</i>
386/2004	<i>Saccharopolyspora species</i> (D. Comb)	<i>Sap I</i>
387/2004	<i>Staphylococcus aureus</i> PS96 (ATCC 49831)	<i>Sau96 I</i>
388/2004	<i>Streptomyces species Bf-61</i> (S.K. Degtyarev)	<i>Sbf I</i>
389/2004	<i>Streptomyces caespitosus</i> (H.	<i>Sca I</i>

	<i>Takahashi</i> )	
390/2004	<i>Streptomyces fimbriatus</i> (ATCC 15051)	<i>Sfi I</i>
391/2004	<i>Serratia fonticola</i> (R. Camp)	<i>Sfo I</i>
392/2004	<i>Streptomyces griseus</i>	<i>SgrA I</i>
393/2004	<i>Serratia marcescens</i> (ATCC 49779)	<i>Sma I</i>
394/2004	<i>Sphaerotilus natans</i> (ATCC 15291)	<i>SnaB I</i>
395/2004	<i>Sphaerotilus species</i> (ATCC 13923).	<i>Spe I</i>
396/2004	<i>Streptomyces phaeochromogenes</i> (NRRL B-3559)	<i>Sph I</i>
397/2004	<i>Sphaerotilus species</i> (ATCC 13925)	<i>Ssp I</i>
398/2004	<i>Salmonella typhi</i> (E.K. Anderson)	<i>Sty I</i>
399/2004	<i>Salmonella typhi</i> D4	<i>StyD4</i>
400/2004	<i>Staphylococcus warneri</i> (B. Frey)	<i>Swa I</i>
401/2004	<i>E. coli</i>	<i>Taq I</i>
402/2004	<i>Thermus filiformis</i> (D. Cowan)	<i>Tfi I</i>
403/2004	<i>Thermococcus litoralis</i> (H.W. Jannasch)	<i>Tli I</i>
404/2004	<i>Thermus species</i> (ITI 346)	<i>Tsp509 I</i>
405/2004	<i>Thermus species R</i> (R.A.D. Williams)	<i>TspR I</i>
406/2004	<i>Thermus thermophilus 111</i> (T. Oshima)	<i>Tth111 I</i>
407/2004	<i>Xanthomonas badrii</i> (ATCC 11672)	<i>Xba I</i>
408/2004	<i>Xanthomonas campestris</i> (C. Polisson)	<i>Xcm I</i>
409/2004	<i>Xanthomonas holcicola</i> (ATCC 13461)	<i>Xho I</i>
410/2004	<i>Xanthomonas malvacearum</i> (ATCC 9924)	<i>Xma I</i>
411/2004	<i>Xanthomonas manihotis 7AS1</i> (ATCC 49764)	<i>Xmn I</i>
412/2004	<i>Spiroplasma sp MQ1</i>	<i>CpG methylases (METHYLASESSS I)</i>
413/2004	<i>Homo sapiens</i>	<i>Human DNA (cytosine – 5) Mtase (Dnmt 1)</i>
414/2004	<i>Arthrobacter luteus</i>	<i>METHYLASE Alu I</i>
415/2004	<i>Bacillus amyloliquefaciens</i>	<i>Methylase BamH I</i>

416/2004	<i>E. coli</i>	<i>dam methylase</i>
417/2004	<i>E. coli</i>	<i>METHYLASE EcoR</i>
418/2004	<i>Haemophilus aegyptius (ATCC 11116)</i>	<i>METHYLASE Hae III</i>
419/2004	<i>Haemophilus haemolyticus (ATCC 10014)</i>	<i>METHYLASE Hha I</i>
420/2004	<i>Haemophilus parainfluenzae (ATCC 49669)</i>	<i>METHYLASE Hpa II</i>
421/2004	<i>Moraxella species (ATCC 49670)</i>	<i>METHYLASE Msp I</i>
422/2004	<i>Thermus aquaticus</i>	<i>METHYLASE Taq I</i>
423/2004	<i>E. coli</i>	<i>T4 DNA ligase</i>
424/2004	<i>Thermus aquaticus HB8</i>	<i>Taq DNA ligase</i>
425/2004	<i>E. coli</i>	<i>T4 RNA ligase</i>
426/2004	<i>E. coli</i>	<i>Rnase If</i>
427/2004	<i>E. coli</i>	<i>ShortCut Rnase III</i>
428/2004	<i>E. coli</i>	<i>Rnase H</i>
429/2004	<i>E. coli</i>	<i>Exonuclease I</i>
430/2004	<i>E. coli</i>	<i>Exonuclease III</i>
431/2004	<i>E. coli</i>	<i>Exonuclease T</i>
432/2004	<i>E. coli</i>	<i>Lambda Exonuclease</i>
433/2004	<i>E. coli</i>	<i>RecJf</i>
434/2004	<i>E. coli</i>	<i>T7 exonuclease</i>
435/2004	<i>Homo sapiens</i>	<i>APE1</i>
436/2004	<i>E. coli</i>	<i>Endonuclease III (Nth)</i>
437/2004	<i>E. coli</i>	<i>Endonuclease IV</i>
438/2004	<i>E. coli</i>	<i>Endonuclease V</i>
439/2004	<i>E. coli</i>	<i>Endonuclease VIII</i>
440/2004	<i>E. coli</i>	<i>Fpg</i>
441/2004	<i>Homo sapiens</i>	<i>h0GG1</i>
442/2004	<i>E. coli</i>	<i>T7 Endonuclease I</i>
443/2004	<i>E. coli</i>	<i>Topoisomerase I</i>
444/2004	<i>E. coli</i>	<i>Uracil-DNA-</i>



		<i>Glycosylase (UDG)</i>
445/2004	<i>E. coli</i>	<i>USER Enzyme</i>
446/2004	<i>E. coli</i>	<i>RecA</i>
447/004	<i>Bacteriófago T4</i>	<i>T4 Gene 32 Protein</i>
448/2004	<i>Bacteriófago P1</i>	<i>Cre Recombinase</i>
449/2004	<i>E. coli</i>	<i>TnsABC* transposase</i>
450/2004	<i>E. coli</i>	<i>T4 polynucleotide kinase</i>
451/2004	<i>E. coli</i>	<i>Antartic Phosphatase</i>
452/2004	<i>E. coli</i>	<i><math>\alpha</math>-Agarase I</i>
453/2004	<i>Bacillus stearothermophilus</i>	<i>Bst DNA Polymerase, Large Fragment</i>
454/2004	<i>Thermus aquaticus YT-I</i>	<i>Taq DNA Polymerase</i>
455/2004	<i>Thermococcus litoralis</i>	<i>VentR® DNA Polymerase</i>
456/2004	<i>Thermococcus litoralis</i>	<i>VentR® (exo-) DNA Polymerase</i>
457/2004	<i>Thermococcus litoralis</i>	<i>VentR® (exo-) DNA Polymerase</i>
458/2004	<i>Pyrococcus species GB-D</i>	<i>Deep VentR® (exo-) DNA Polymerase</i>
459/2004	<i>Thermococcus sp. (strain 9°N-7)</i>	<i>9°Nm DNA Polymerase</i>
460/2004	<i>Thermococcus species 9°N-7</i>	<i>Therminator DNA Polymerase</i>
461/2004	<i>Bacteriófago T7</i>	<i>T7 DNA Polymerase</i>
462/2004	<i>E. coli</i>	<i>DNA Polymerase I</i>
463/2004	<i>E. coli</i>	<i>DNA Polymerase I, Large (Klenow) Fragment</i>
464/2004	<i>E. coli</i>	<i>Klenow Fragment (3'→5' exo-)</i>
465/2004	<i>Moloney Murine Leukemia Virus (M- MuLV)</i>	<i>M-MuLV Reverse Transcriptase</i>

466/2004	<i>E. coli</i>	T4 DNA Polymerase
467/2004	<i>Bacillus subtilis phage phi29 (Fi29)</i>	<i>phi29 DNA Polymerase</i>
468/2004	<i>Bos taurus</i>	Terminal Transferase
469/2004	<i>Bacteriophage T7</i>	T7 RNA Polymerase
470/2004	<i>Salmonella typhimurium LT2Z</i>	<i>SP6 RNA Polimerase</i>

CTNBio states that this abstract does not exempt the applicant from the compliance with other current local laws in force applicable to the application subject.

The integral text of this CTNBio's Preliminary Conclusive Technical Opinion comprises the process filed in CTNBio. Supplementary information and requests of detailed information on the process aforementioned should be addressed in writing to Secretaria Executiva, CTNBio - SPO Área 5, Quadra 3 – Bloco B – Térreo – Sala 8 – CEP: 70610-200 – Brasília (DF). Phone: (61) 411 – 5516; Fax: (61) 317-7475.

**Jorge Almeida Guimarães**  
**President of CTNBio**