J. Braz. Chem. Soc., Vol. 23, No. 7, S1-S6, 2012.
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0103 - 5053 $6.00+0.00

Supplementary Information

Lipase-Catalyzed Kinetic Resolution of (±)-Mandelonitrile under Conventional Condition and Microwave Irradiation

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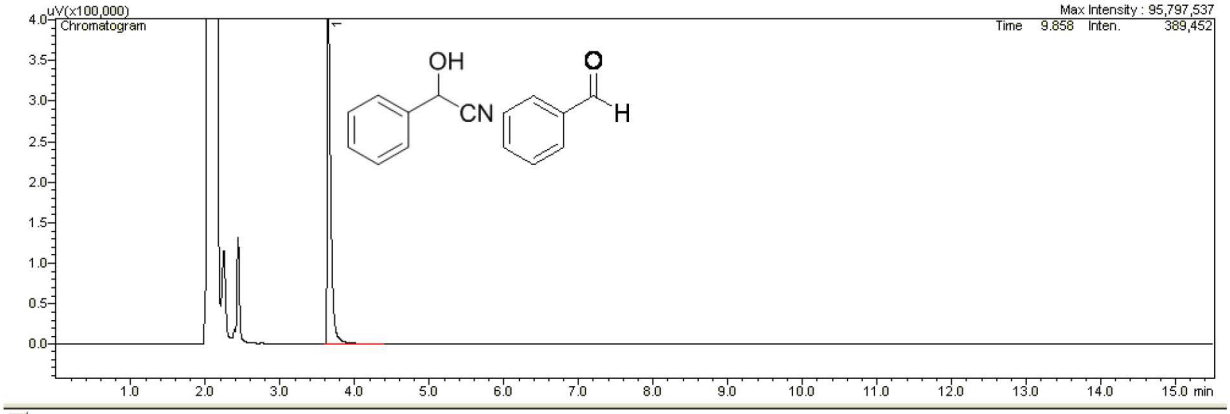
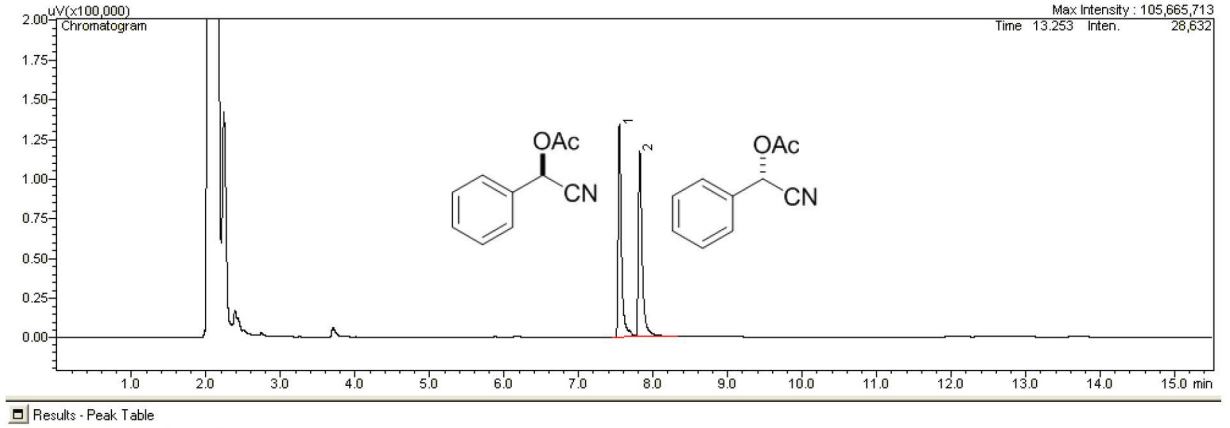


Results - Peak Table

Peak Table | Compound | Group | Calibration Curve

Peak#	Ret.Time	Area%	Area	Height	Conc.	Units	Mark	Compound ID#	Compound Name
1	3.646	100.0000	1410334.1	430331.6	100.00000		S		

Figure S1. GC-FID chromatogram of (±)-mandelonitrile and benzaldehyde.



Results - Peak Table

Peak Table | Compound | Group | Calibration Curve

Peak#	Ret.Time	Area%	Area	Height	Conc.	Units	Mark	Compound ID#	Compound Name
1	7.547	49.2459	413322.3	132688.1	49.24595		V		
2	7.820	50.7541	425979.9	116454.3	50.75405		V		

Figure S2. GC-FID chromatogram of (±)-mandelonitrile acetate.

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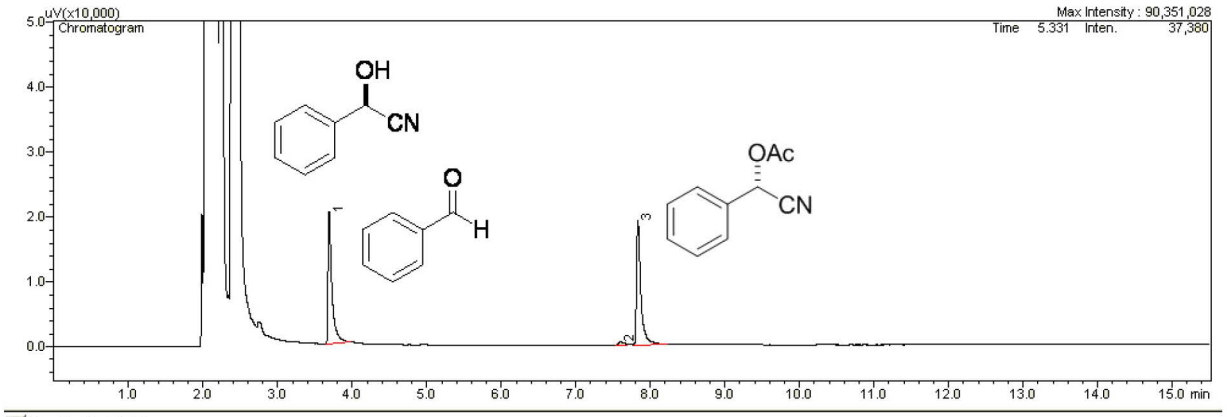
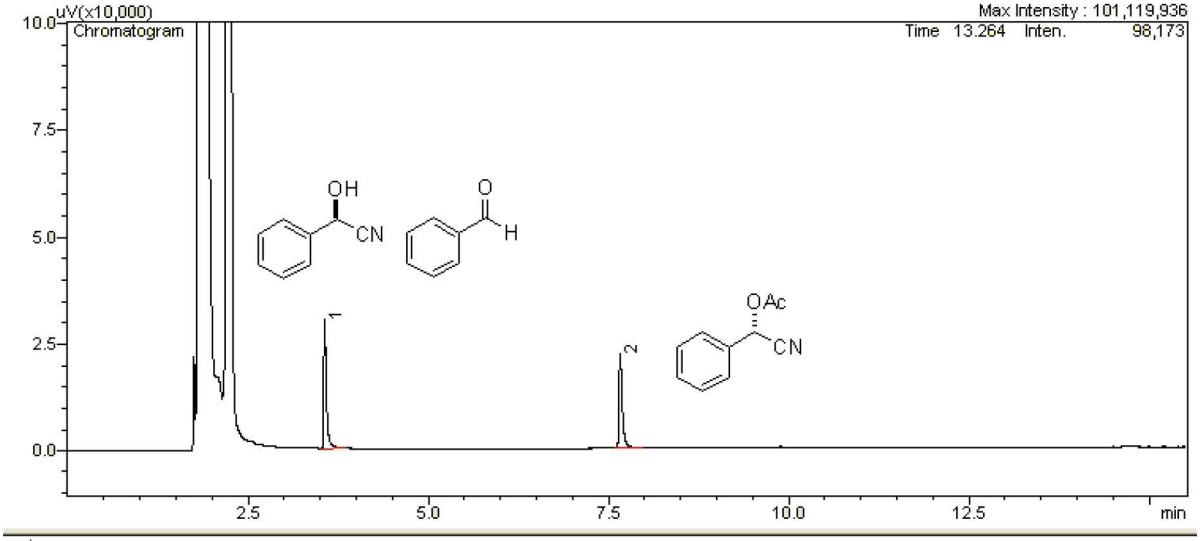


Results - Peak Table

Peak Table | Compound | Group | Calibration Curve

Peak#	Ret.Time	Area%	Area	Height	Conc.	Units	Mark	Compound ID#	Compound Name
1	3.691	48.8216	75328.1	20283.4	48.82161				
2	7.596	1.6848	2599.6	549.2	1.68483				
3	7.833	49.4936	76364.9	19093.3	49.49356		V		

Figure S3. GC-FID chromatogram of (*S*)-mandelonitrile acetate (92% ee) and unreacted mandelonitrile/benzaldehyde obtained by lipase CALB under microwave irradiation (8 h, 80 °C) in toluene. This chromatogram reports a union of the four reactions.

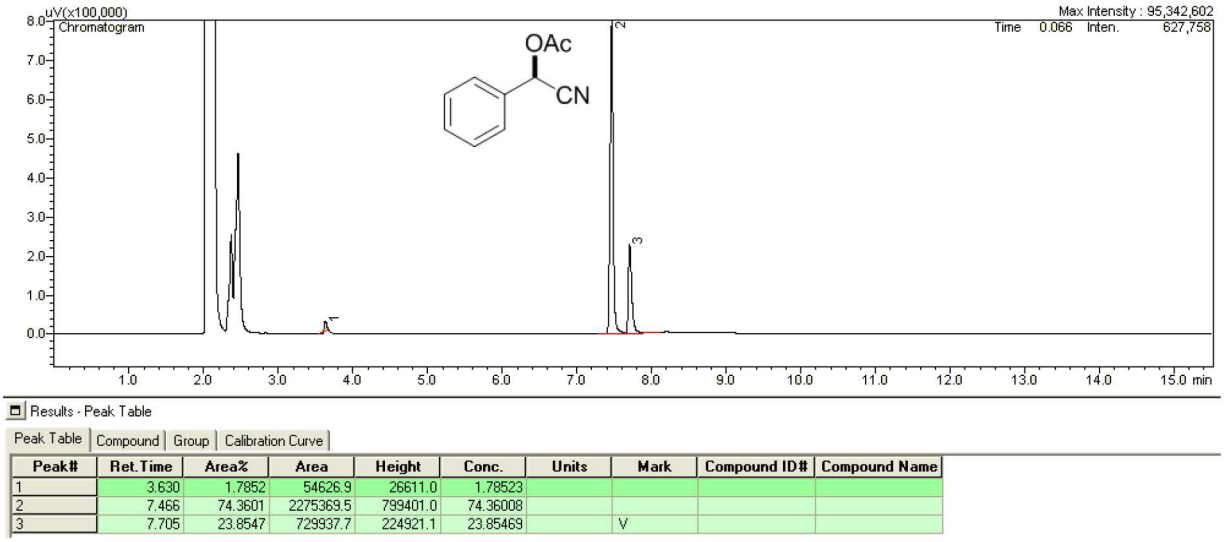


Results - Peak Table

Peak Table | Compound | Group | Calibration Curve

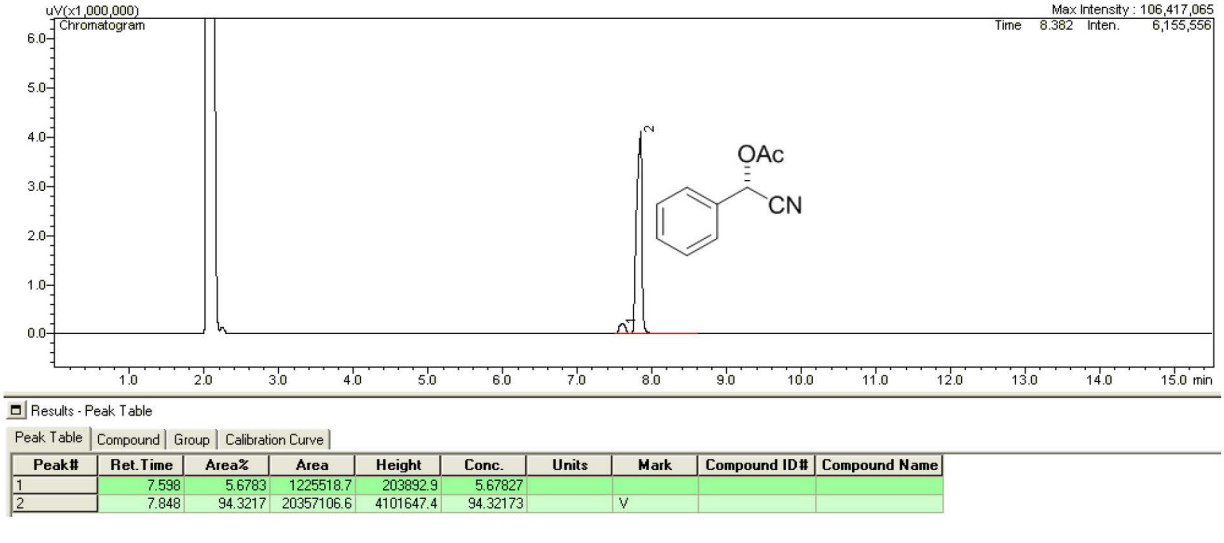
Peak#	Ret.Time	Area%	Area	Height	Conc.	Units	Mark	Compound ID#	Compound Nam
1	3.562	53.4698	80004.1	29873.1	53.46979				
2	7.662	46.5302	69620.8	22146.6	46.53021				

Figure S4. GC-FID chromatogram of (*S*)-mandelonitrile acetate (98% ee) and unreacted (*R*)-mandelonitrile/benzaldehyde obtained by lipase CALB under conventional condition on an orbital shaker in toluene (130 rpm, 168 h, 32 °C).



Peak#	Ret.Time	Area%	Area	Height	Conc.	Units	Mark	Compound ID#	Compound Name
1	3.630	1.7852	54626.9	26611.0	1.78523				
2	7.466	74.3601	2275369.5	799401.0	74.36008				
3	7.705	23.8547	729937.7	224921.1	23.85469		V		

Figure S5. GC-FID chromatogram of (*R*)-mandelonitrile acetate (51% ee) obtained after derivatization with Ac_2O/py of the unreacted (*R*)-mandelonitrile by CALB under conventional condition on an orbital shaker in toluene (130 rpm, 184 h, 32 °C). This chromatogram reports a union of the four reactions.



Peak#	Ret.Time	Area%	Area	Height	Conc.	Units	Mark	Compound ID#	Compound Name
1	7.598	5.6783	1225518.7	203892.9	5.67827				
2	7.848	94.3217	20357106.6	4101647.4	94.32173		V		

Figure S6. GC-FID chromatogram of (*S*)-mandelonitrile acetate (89% ee) obtained after derivatization with Ac_2O/py of the unreacted mandelonitrile by CALB on microwave irradiation (8 h, 80 °C). This chromatogram reports a union of the four reactions.

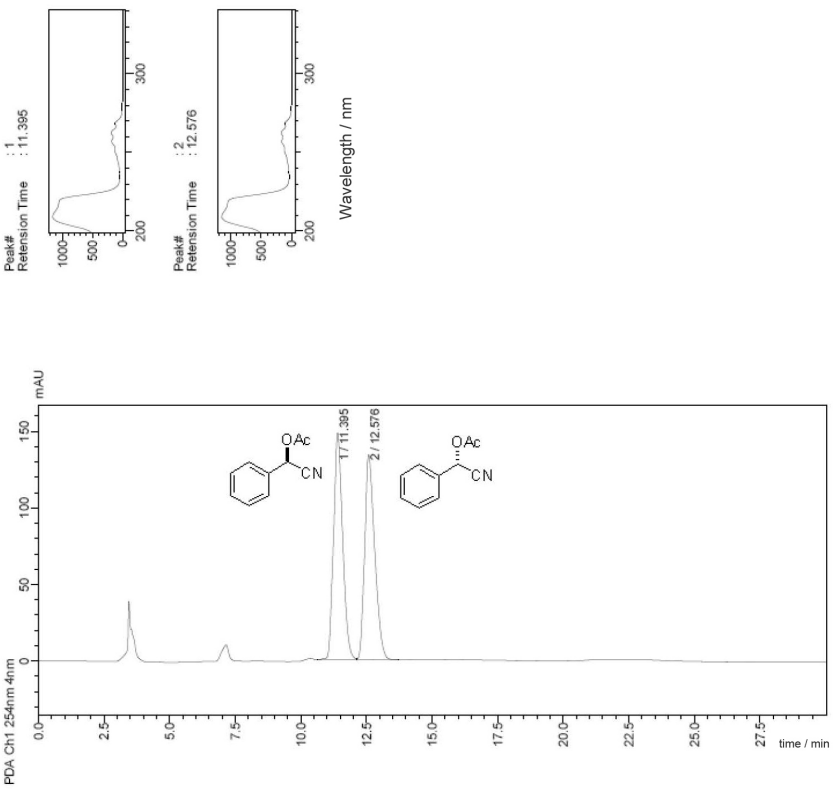


Figure S7. UV spectra and HPLC chromatogram of (±)-mandelonitrile acetate.

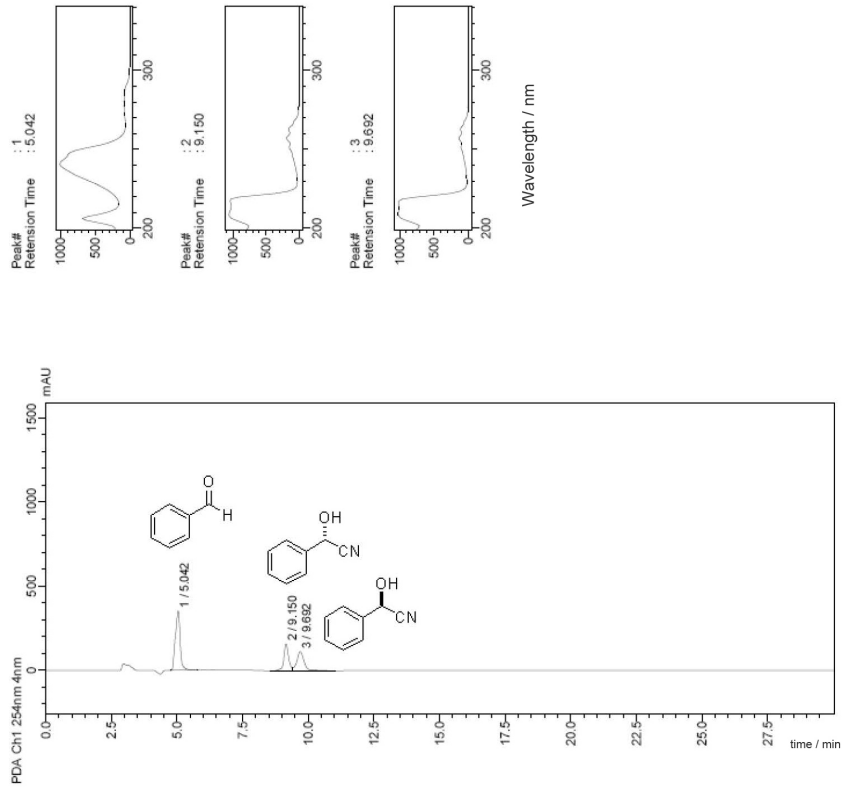


Figure S8. UV spectra and HPLC chromatogram of (±)-mandelonitrile and benzaldehyde.

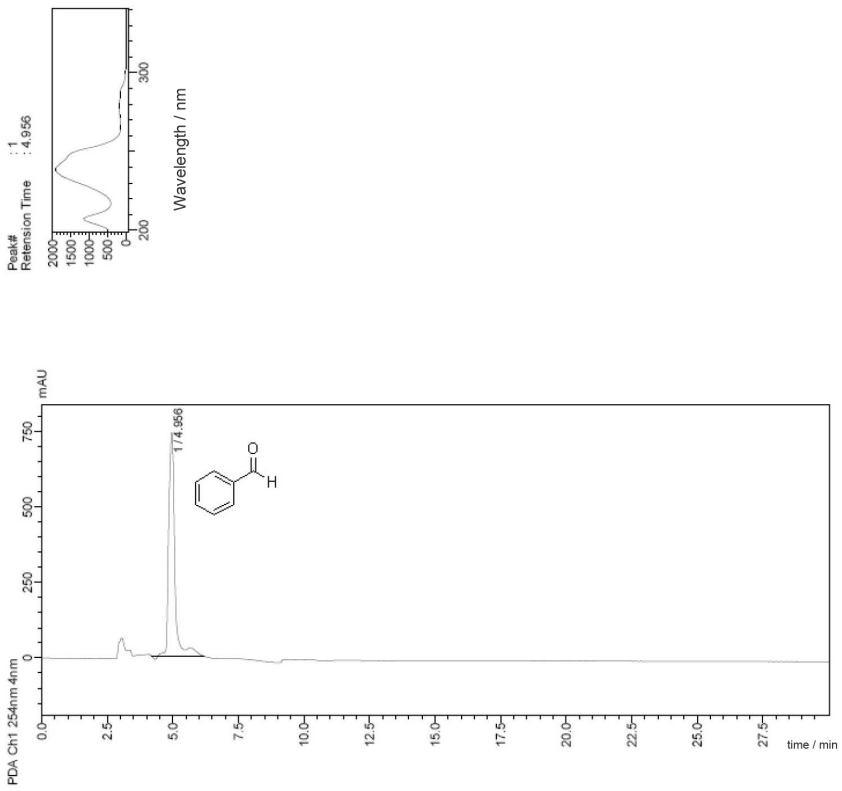


Figure S9. UV spectrum and HPLC chromatogram of benzaldehyde (retention time 4.96 min)

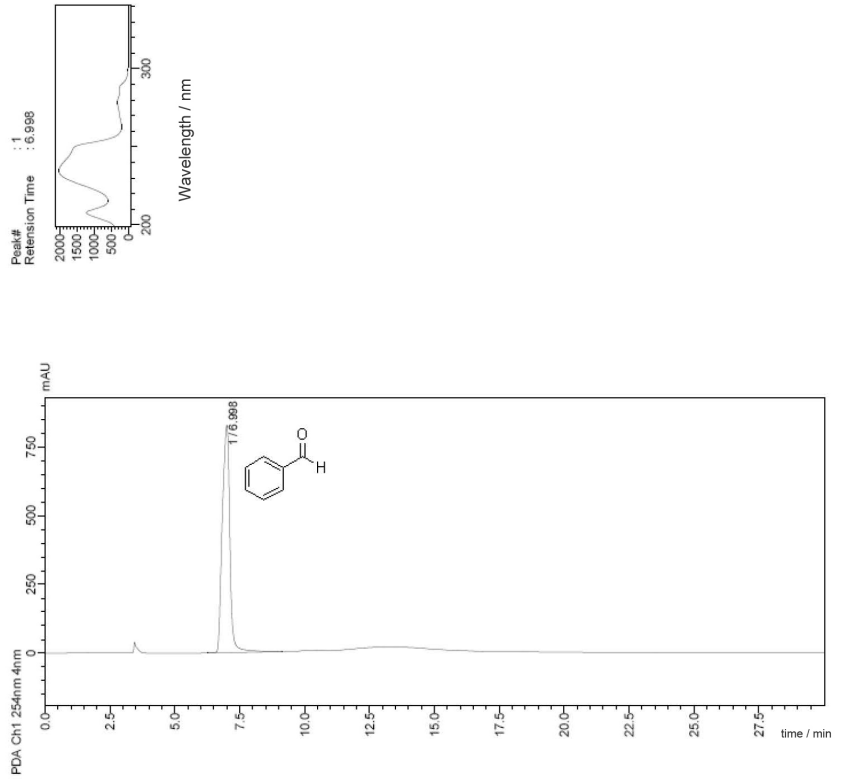


Figure S10. UV spectrum and HPLC chromatogram of benzaldehyde (retention time 6.99 min)

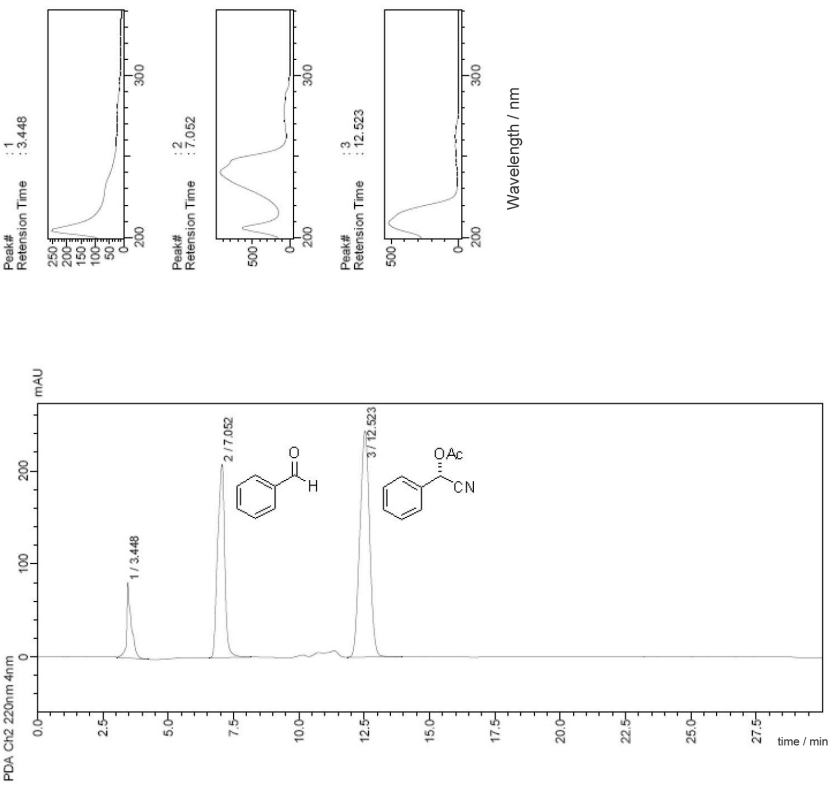


Figure S11. UV spectra and HPLC chromatogram of (*S*)-mandelonitrile acetate (98% ee) separated by column chromatographic. Reaction obtained by lipase CALB under conventional condition on an orbital shaker (130 rpm, 184 h, 32 °C).

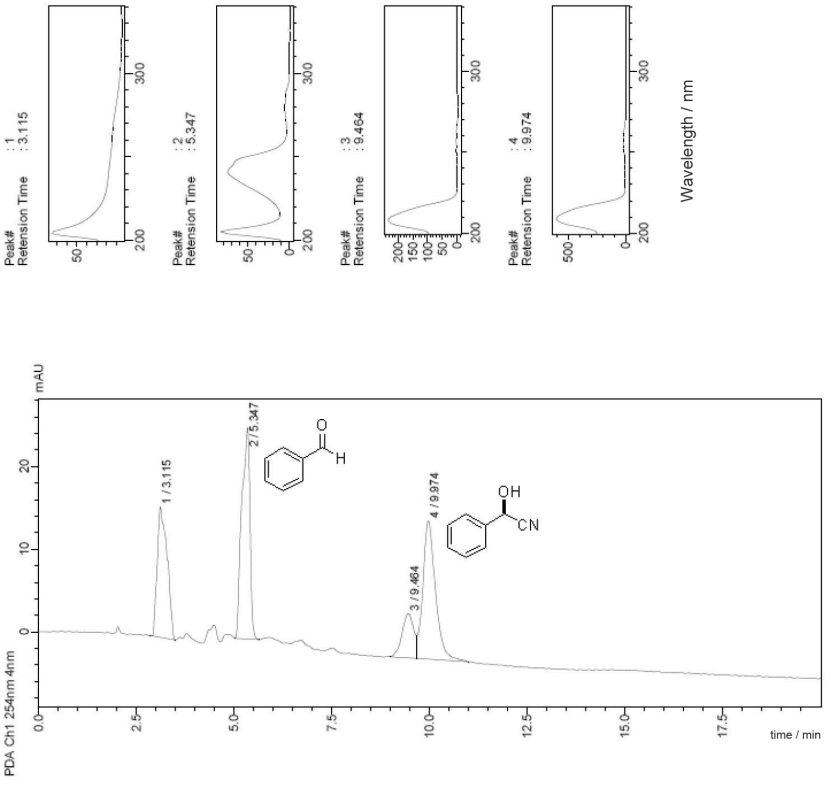


Figure S12. UV spectra and HPLC chromatogram of (*R*)-mandelonitrile (54% ee) separated by column chromatographic. Reaction obtained by lipase CALB under conventional condition on an orbital shaker (130 rpm, 184 h, 32 °C).