

References

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APPENDIX A

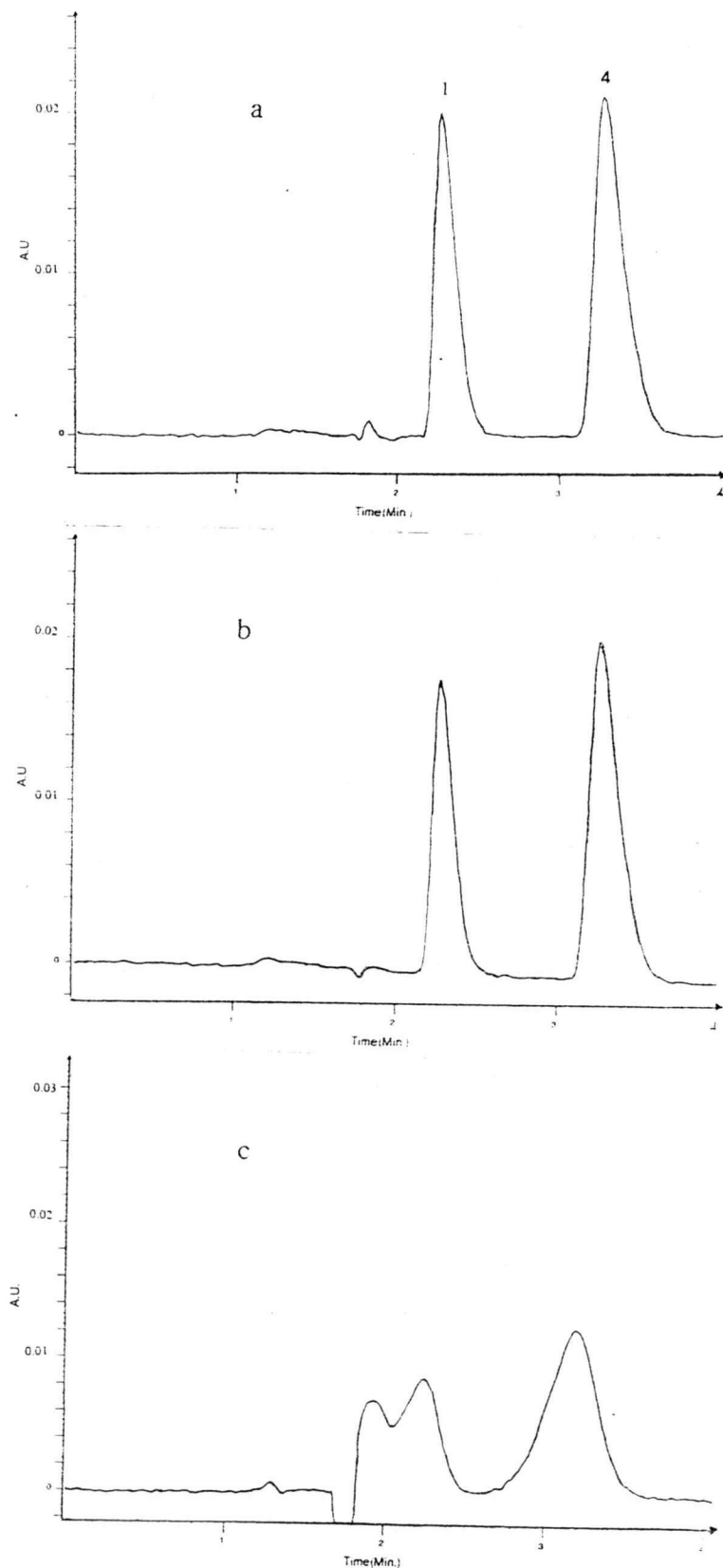


Figure A - 1 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 2.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

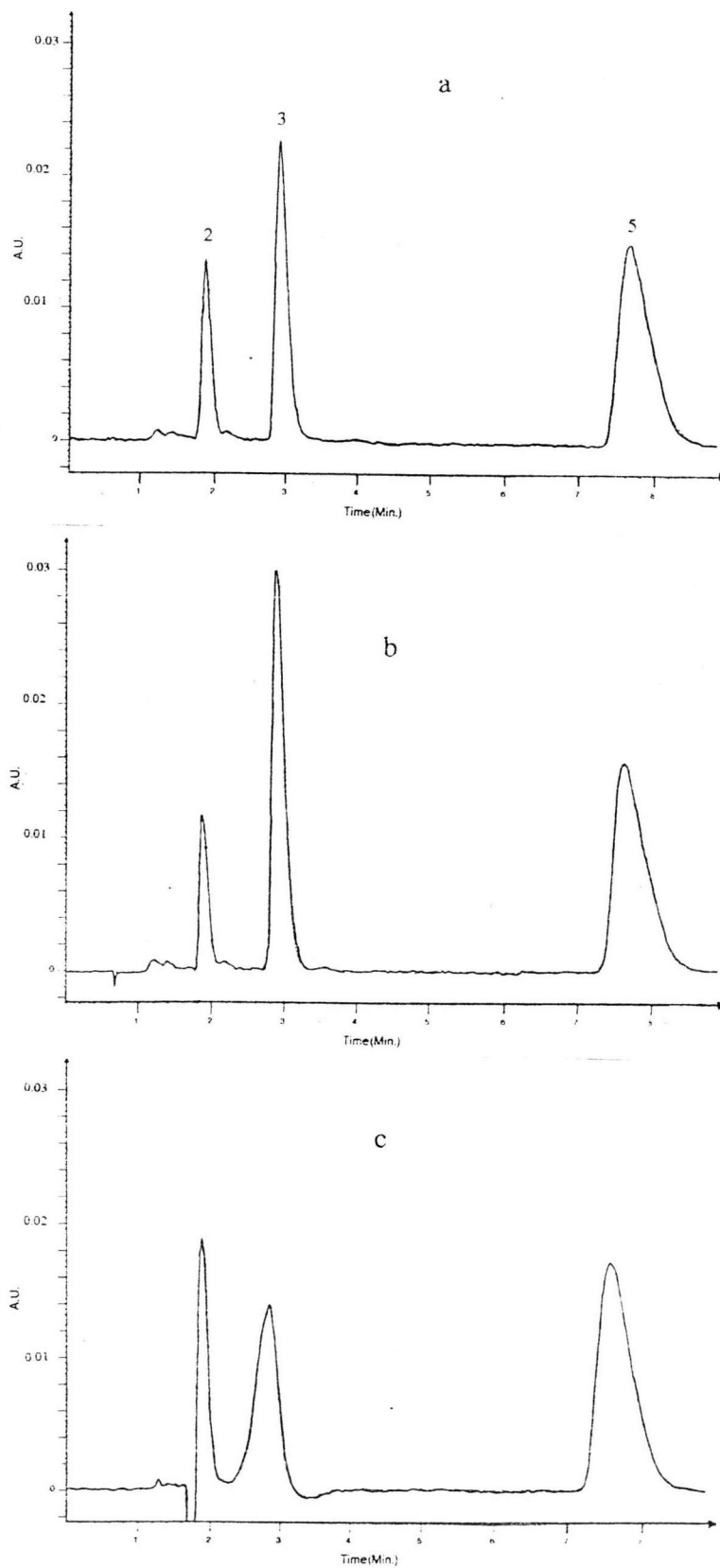


Figure A - 2 Chromatograms of standard mixtures of L-ascorbic acid (2), benzoic acid (3) and salicylic acid (5).Chromatographic conditions as given in A - 1

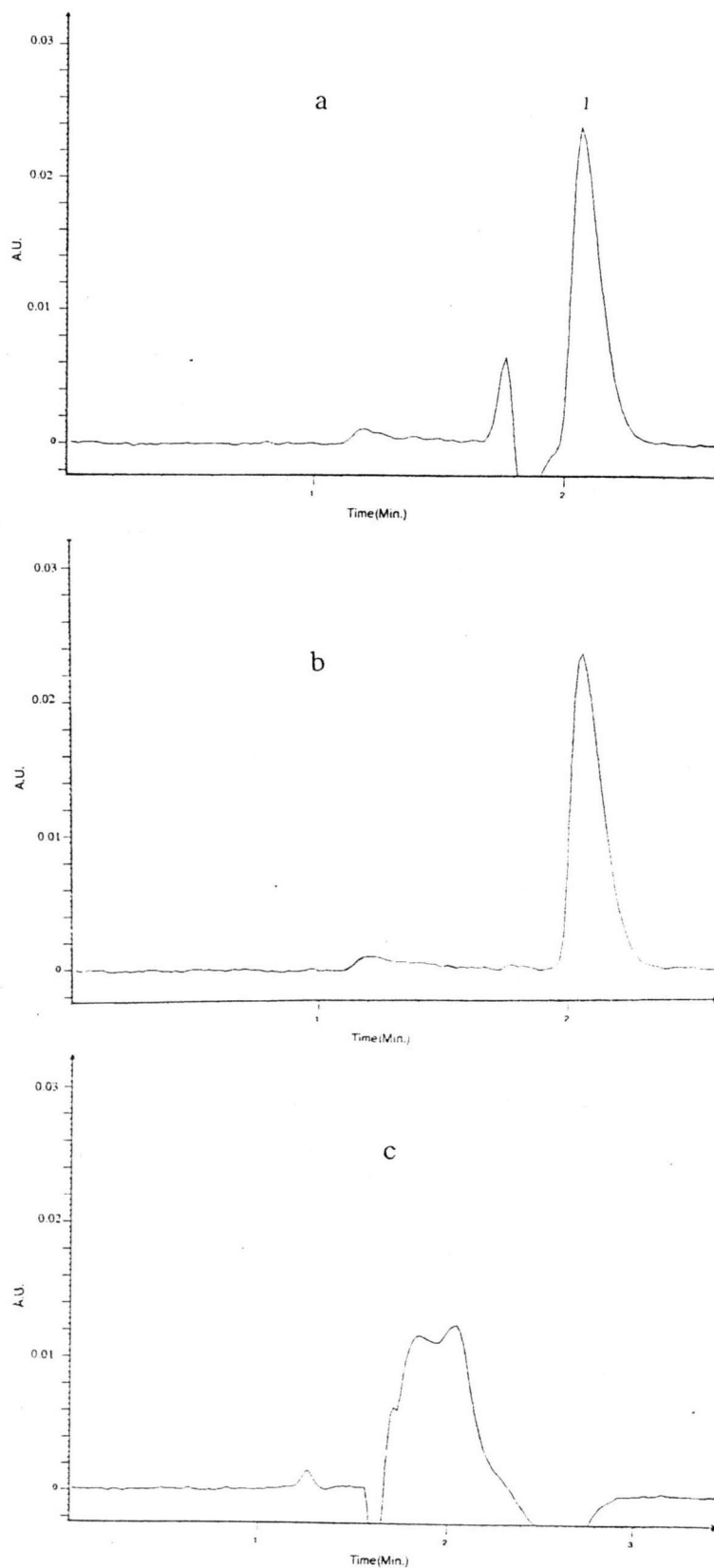


Figure A - 3 Chromatogram of standard phenol (1) at pH 6.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

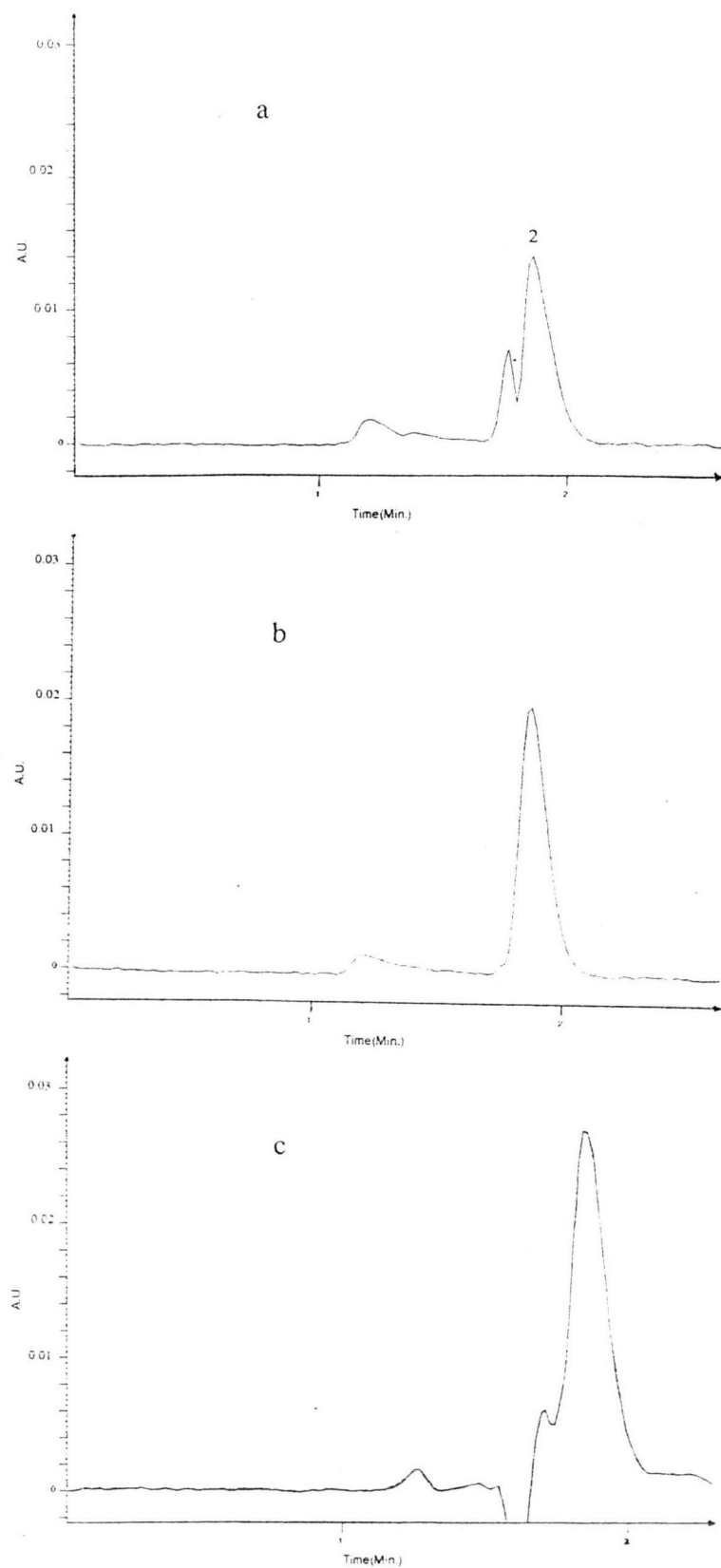


Figure A - 4 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in A - 3

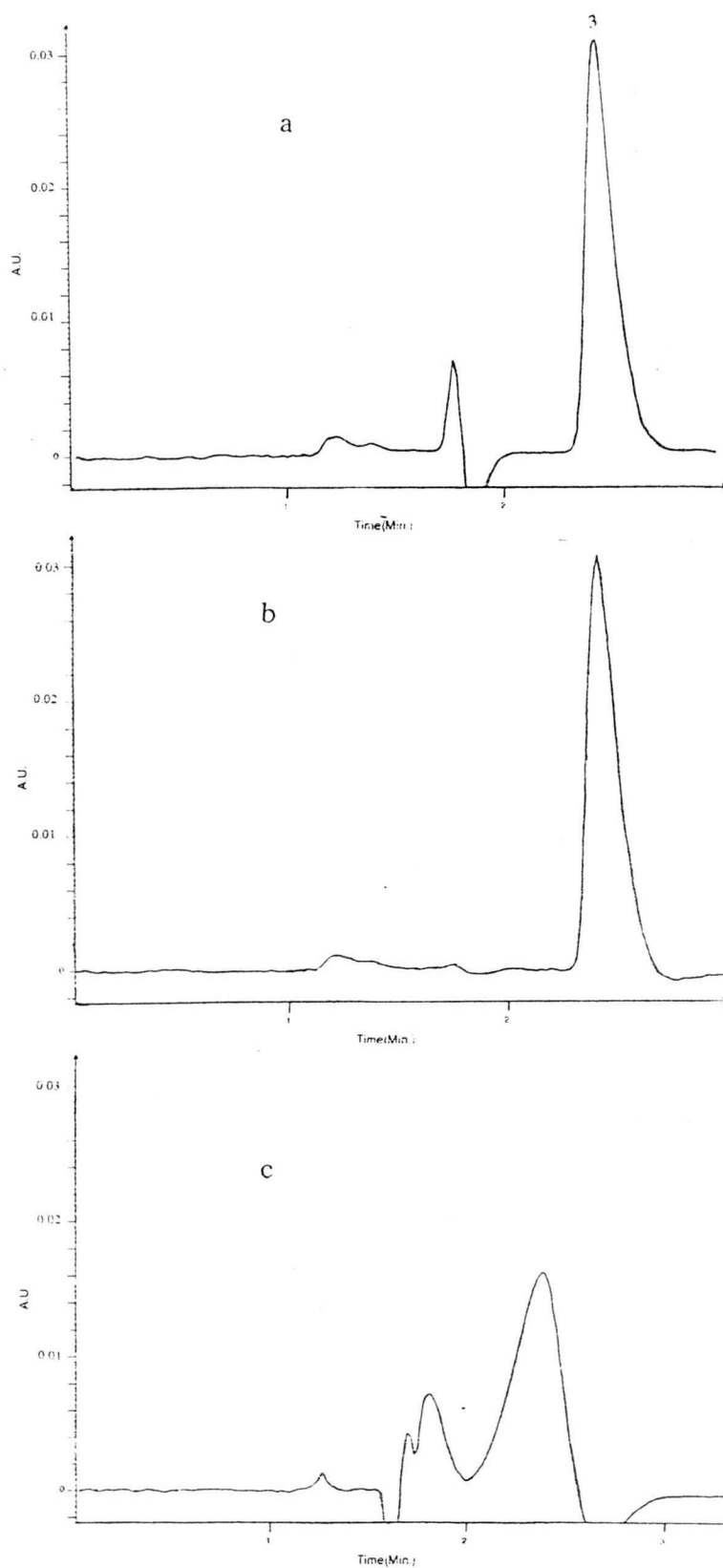


Figure A - 5 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in A - 3

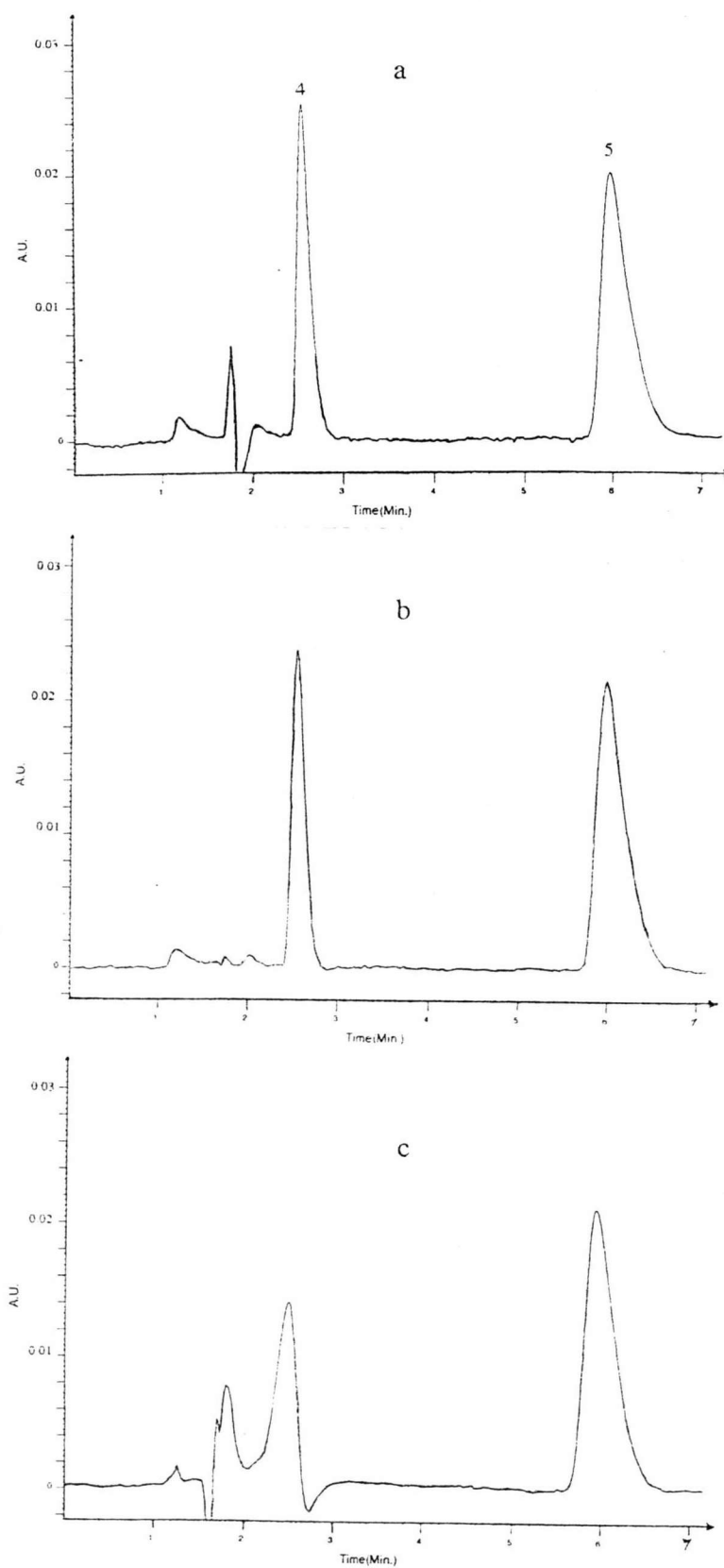


Figure A - 6 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in A - 3

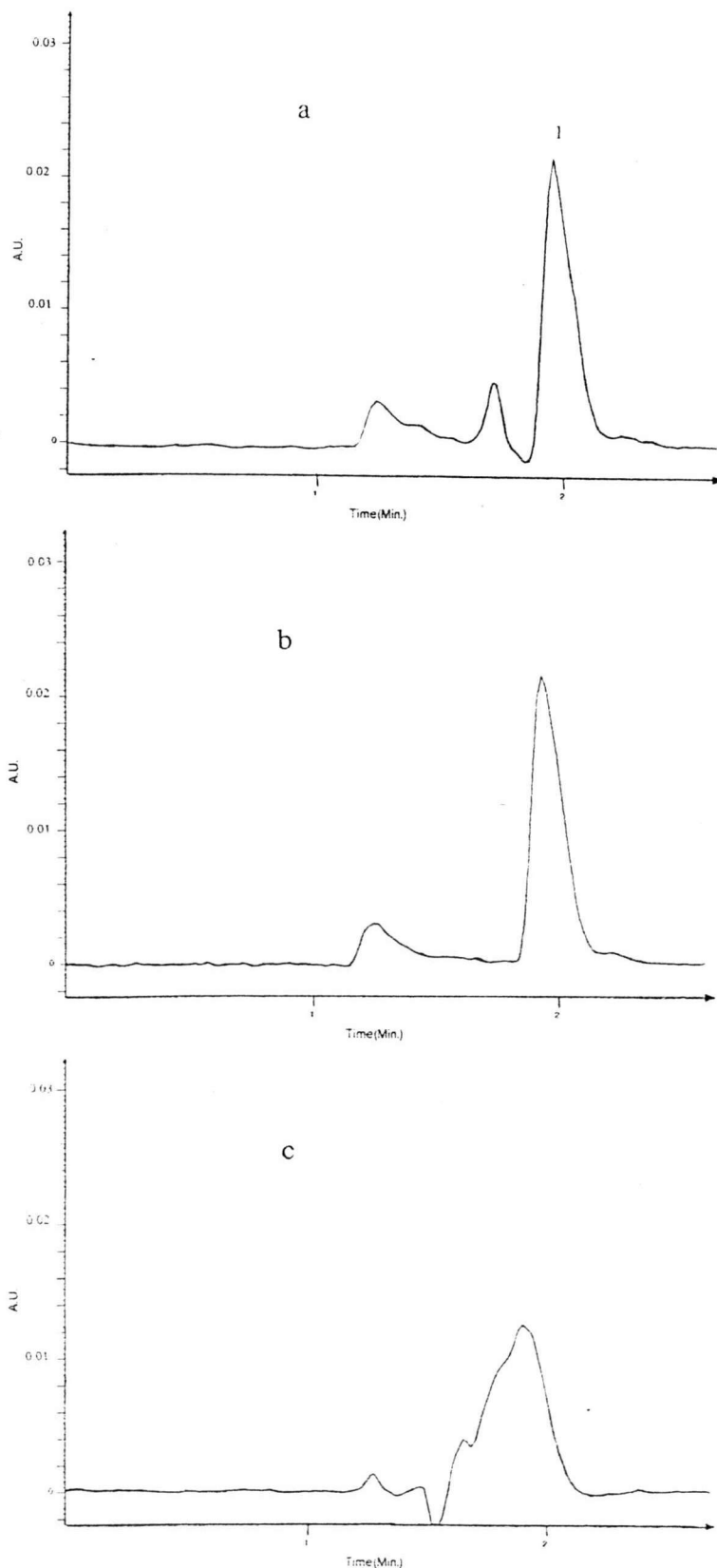


Figure A -7 Chromatogram of standard phenol (1) at pH 6.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

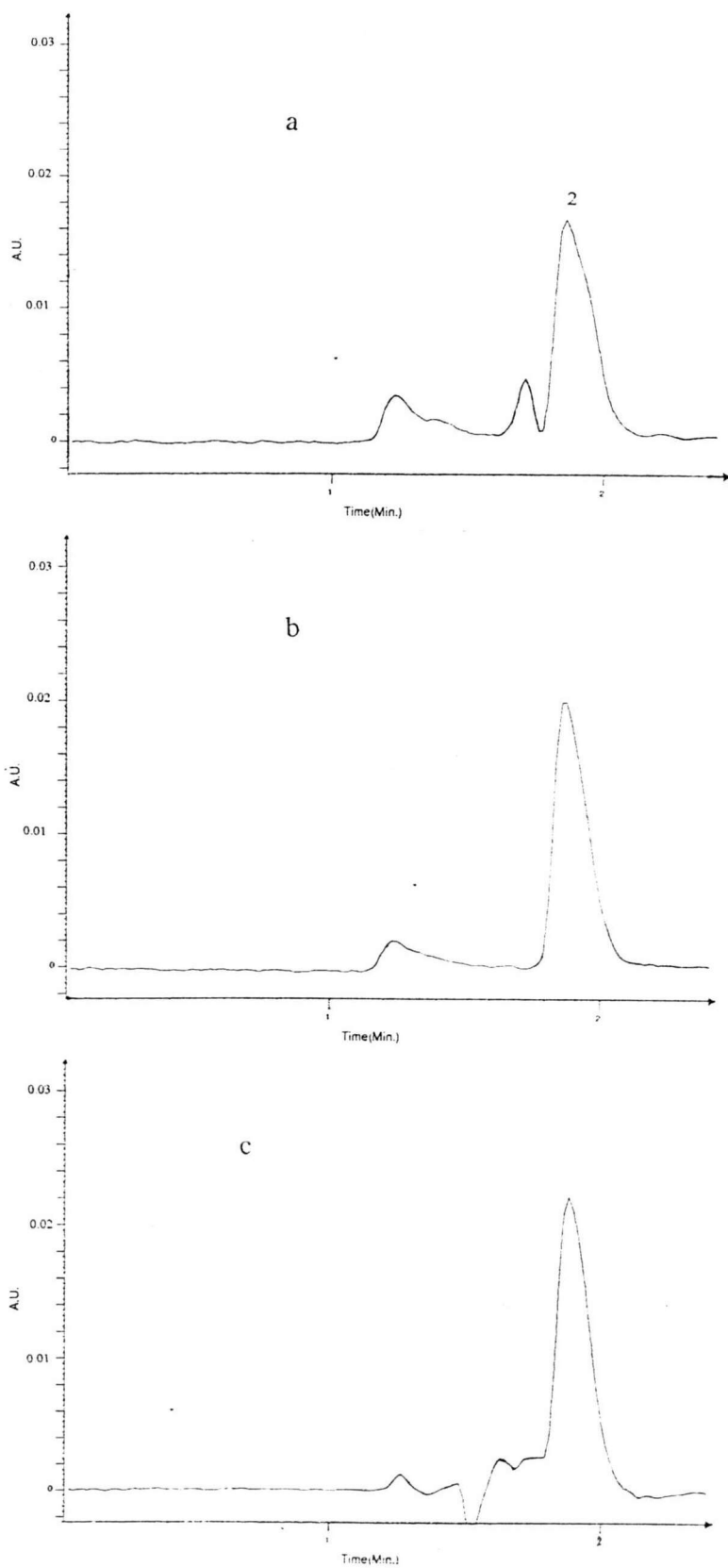


Figure A - 8 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in A - 7

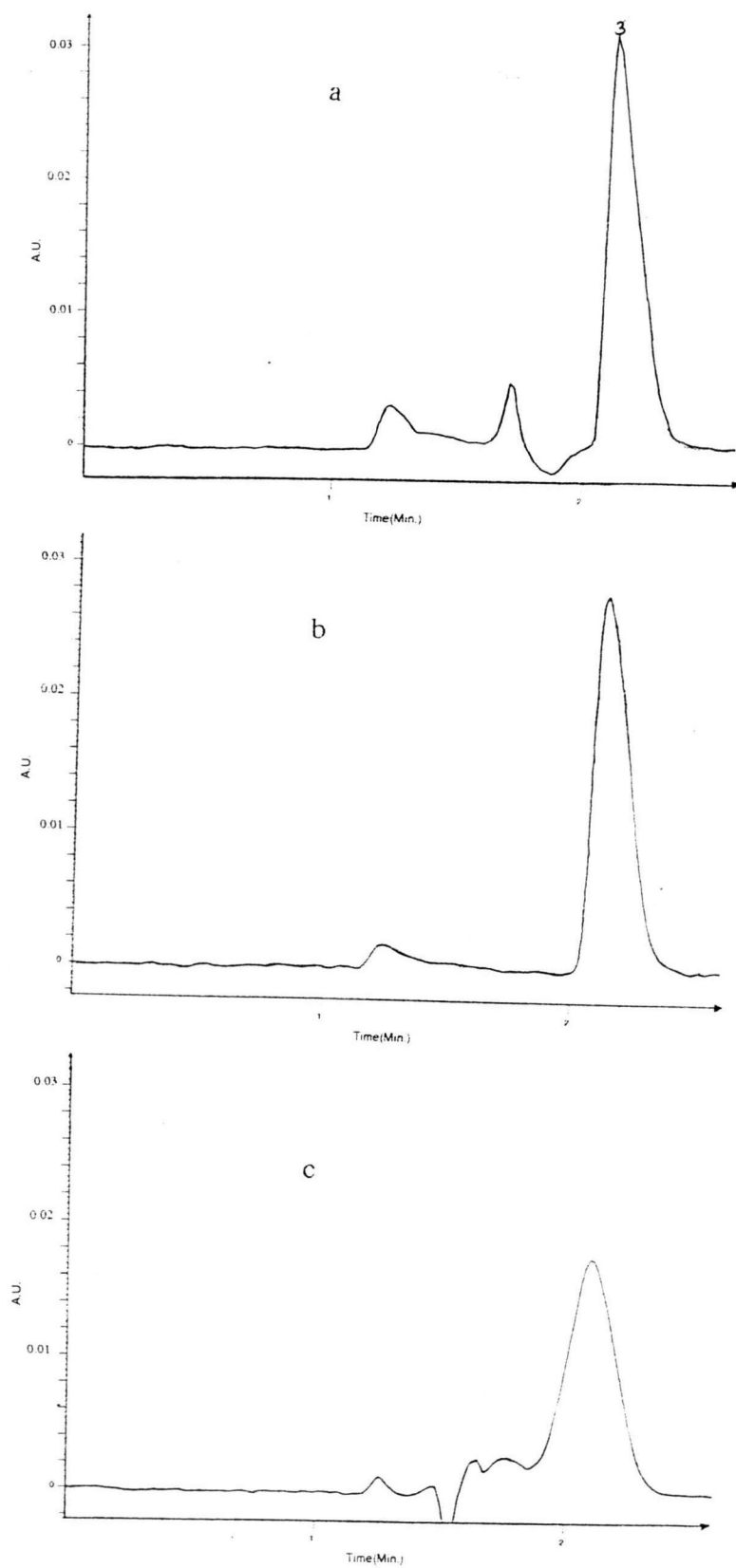


Figure A - 9 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in A - 7

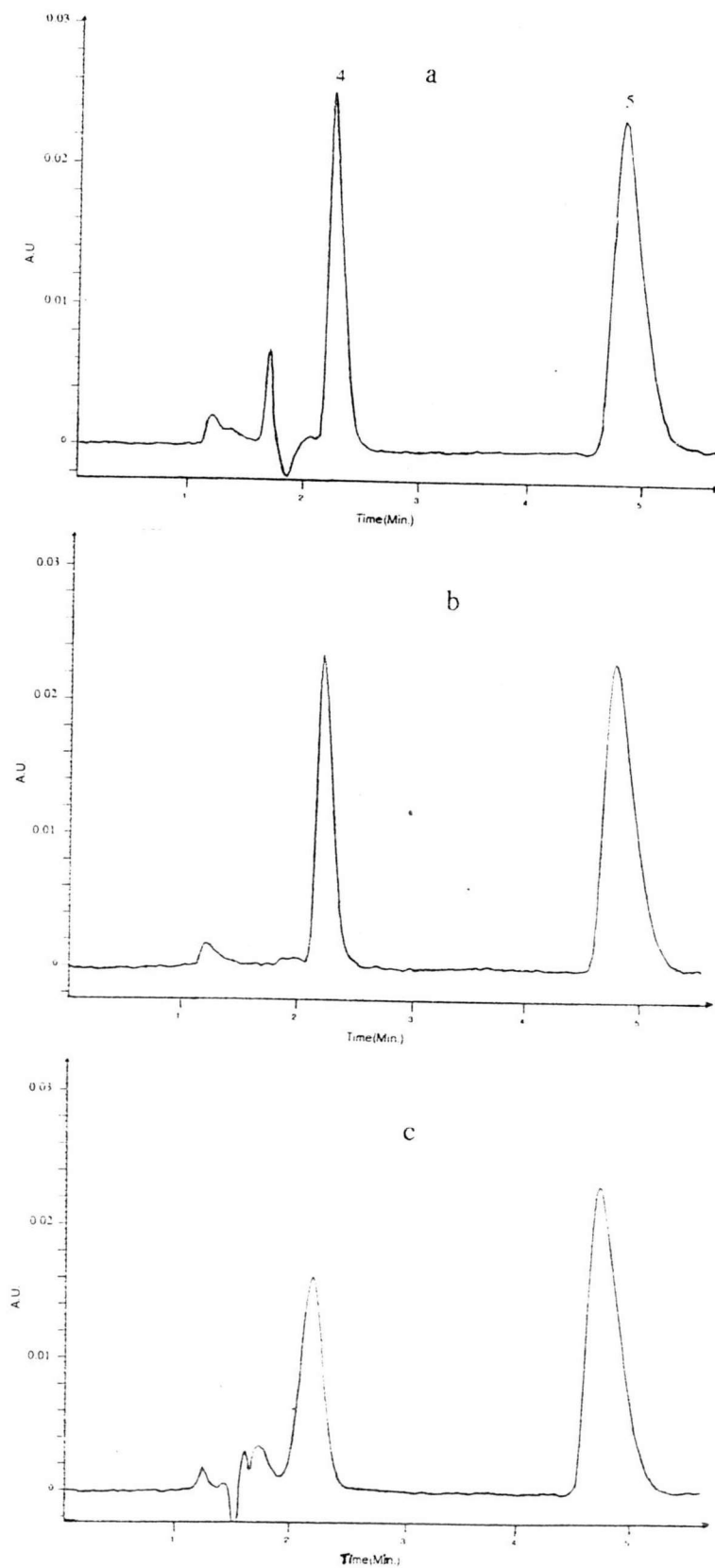


Figure A -10 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in A - 7

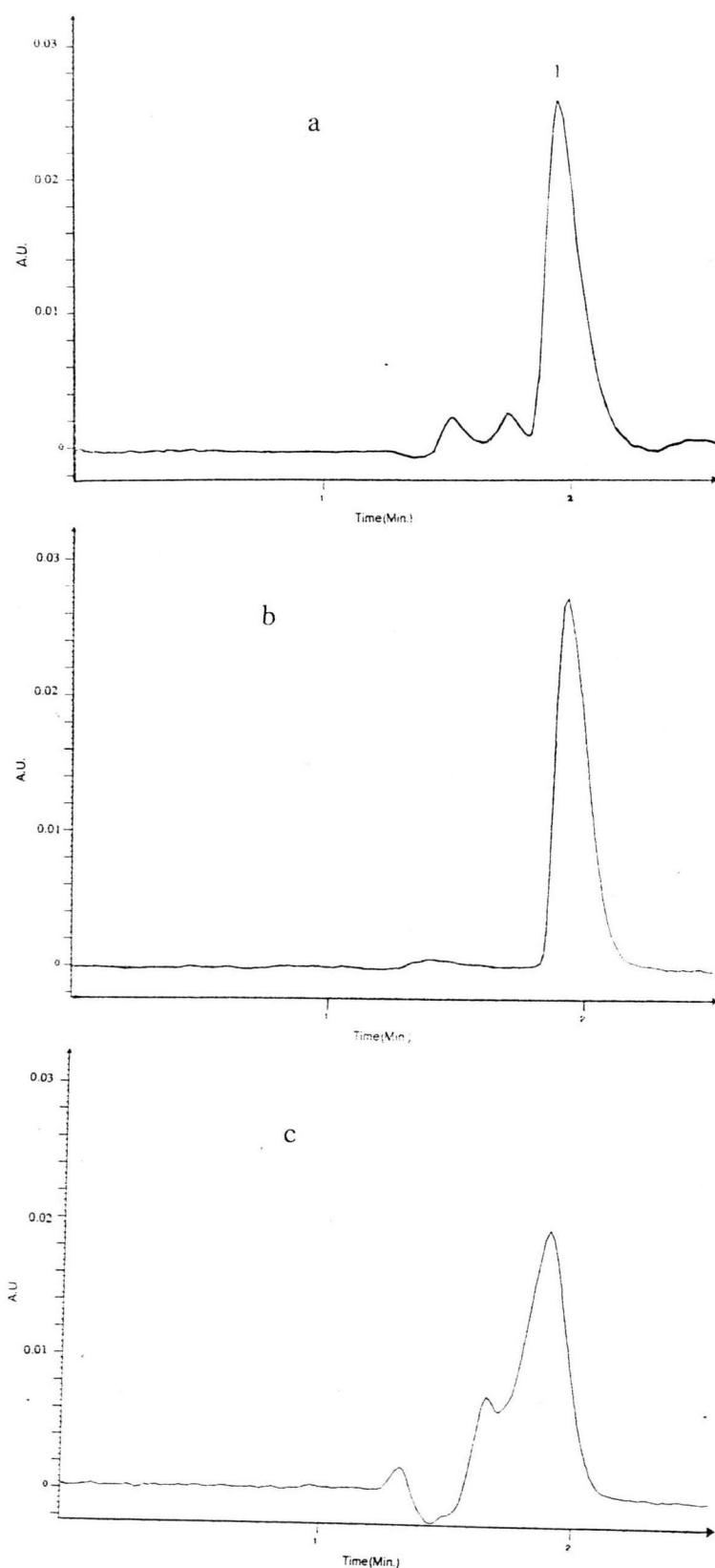


Figure A - 11 Chromatogram of standard phenol (1) at pH 2.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

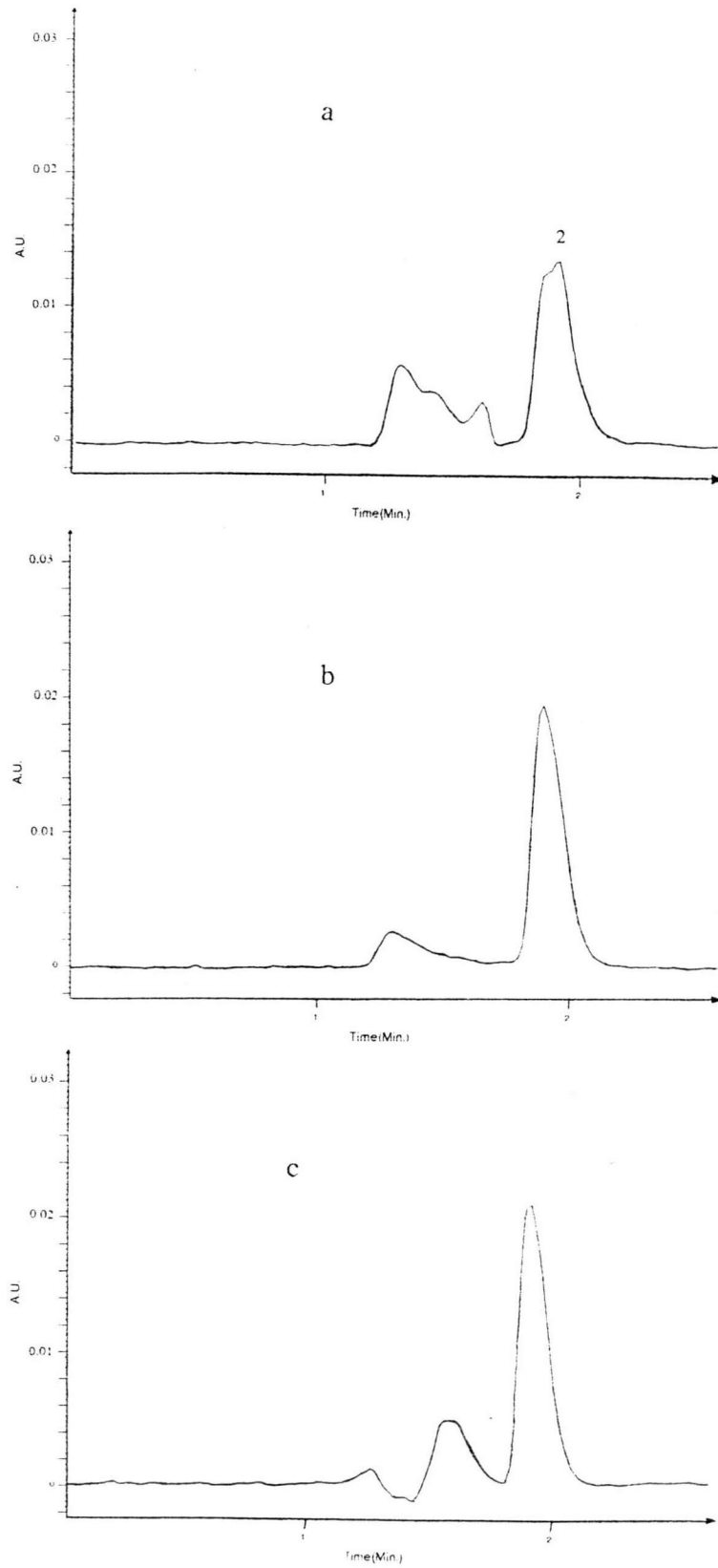


Figure A - 12 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in A - 11

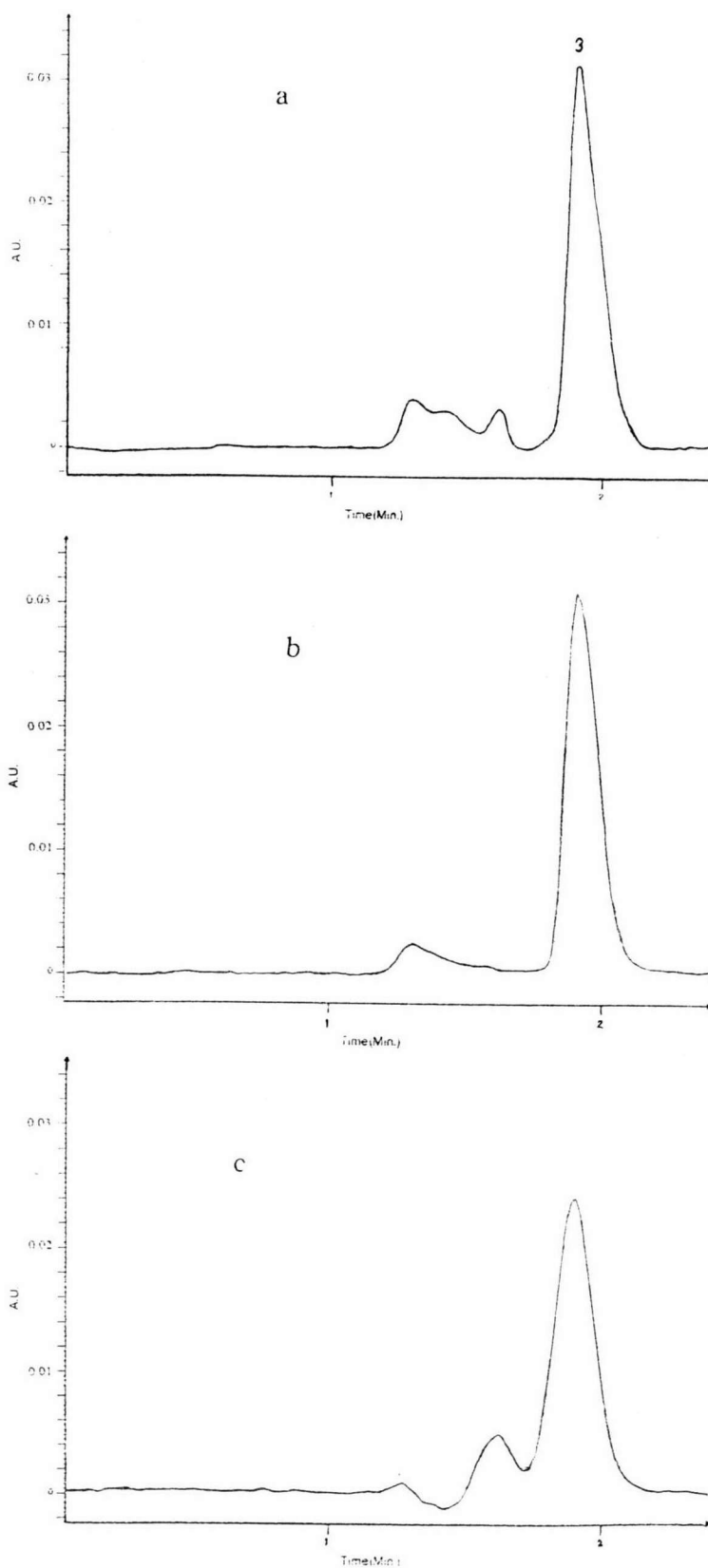


Figure A - 13 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in A - 11

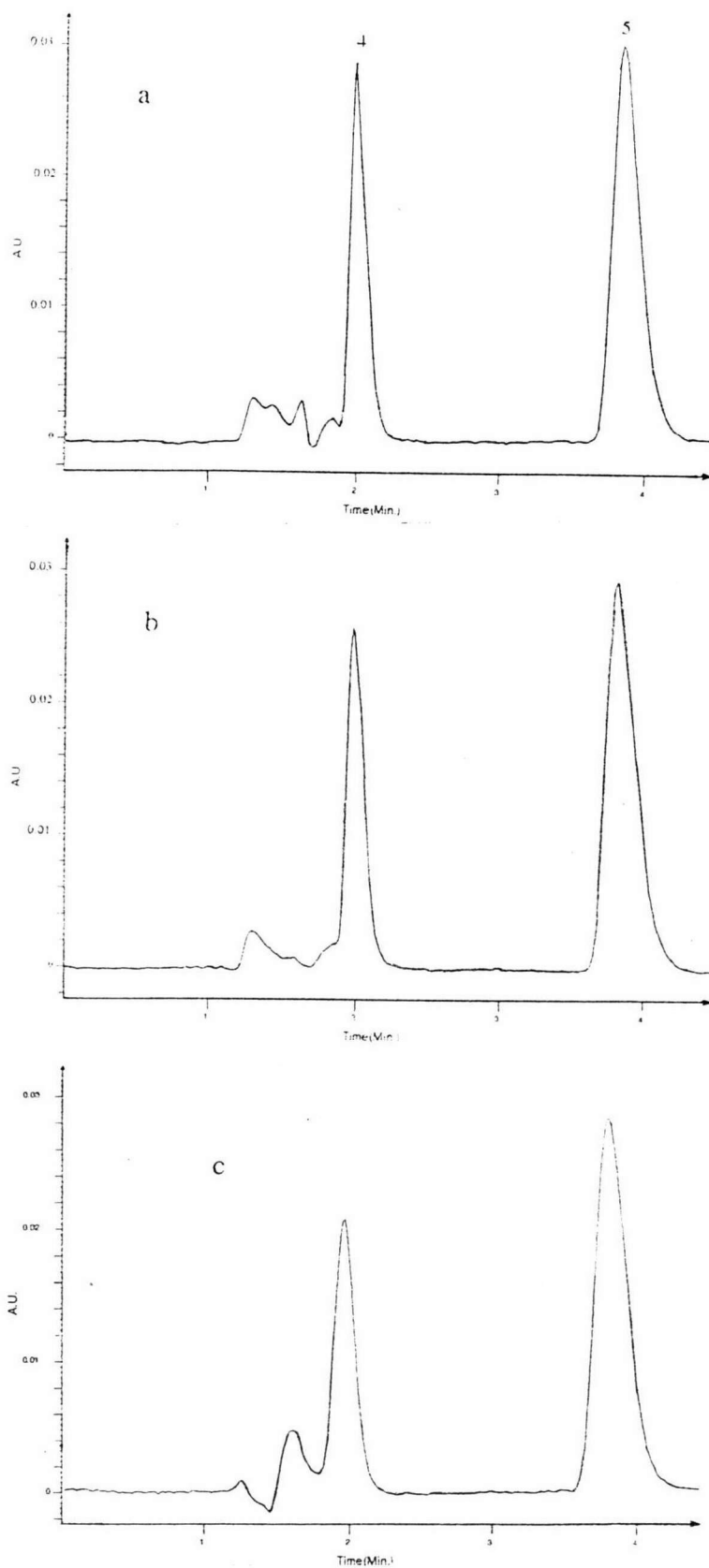


Figure A -14 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in A - 11

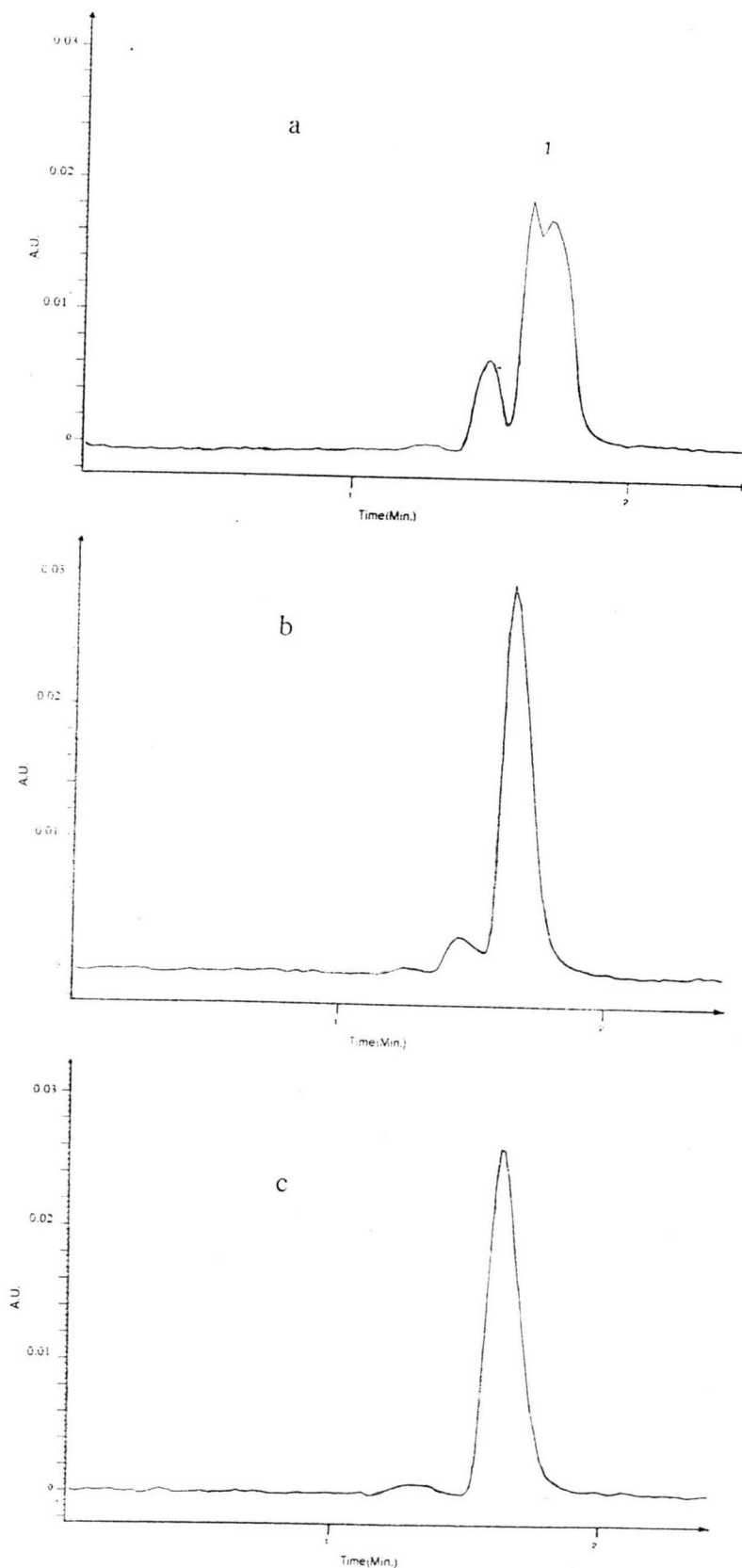


Figure A -15 Chromatogram of standard phenol (1) at pH 6.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

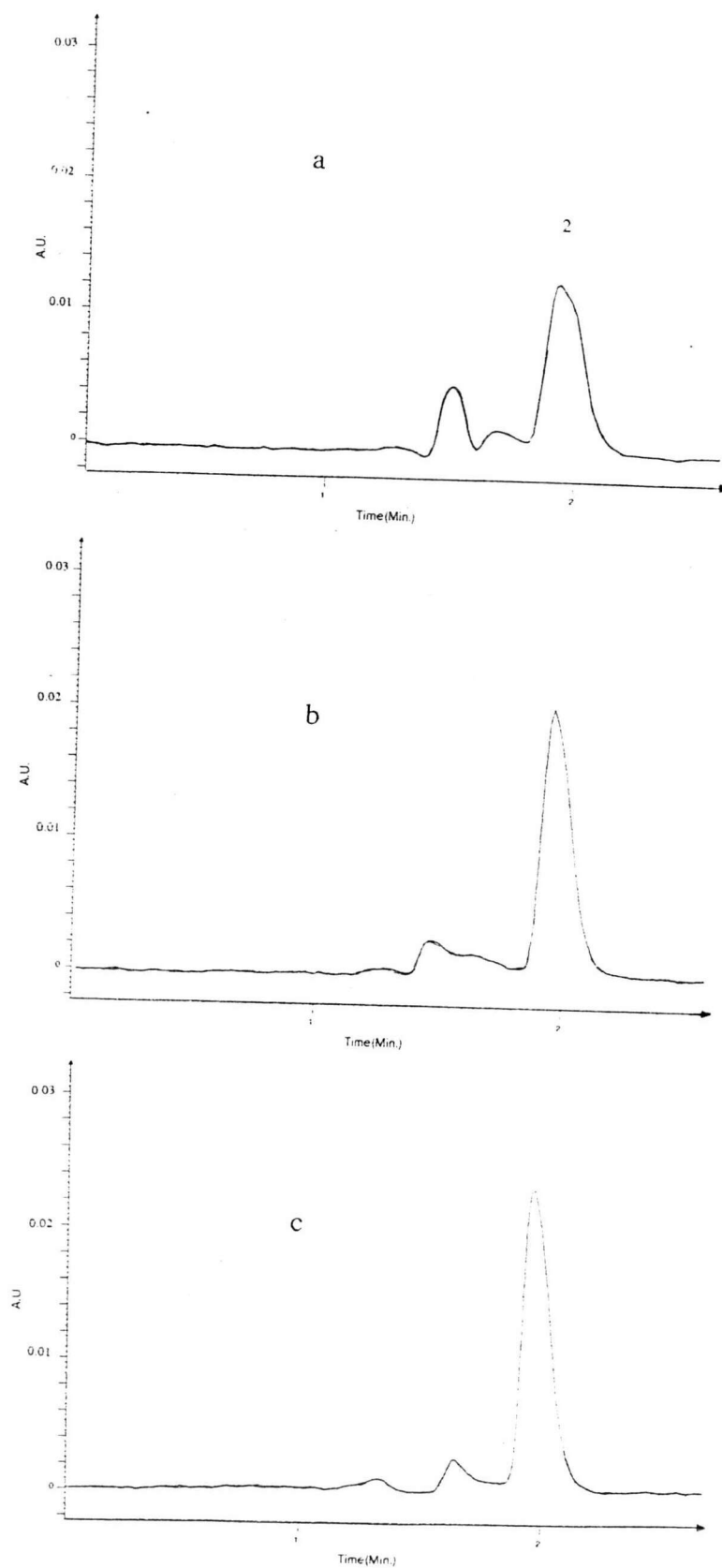


Figure A - 16 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in A - 15

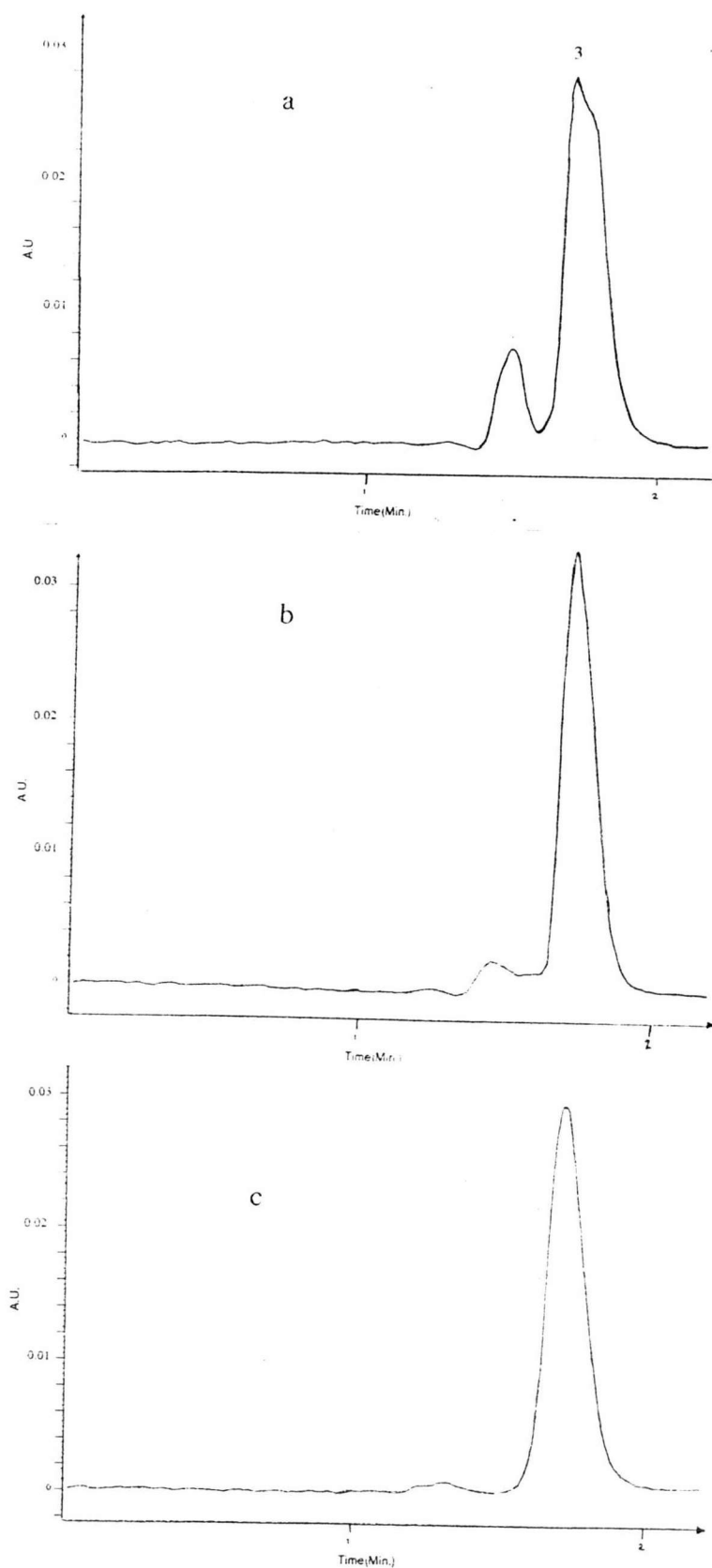


Figure A - 17 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in A - 15

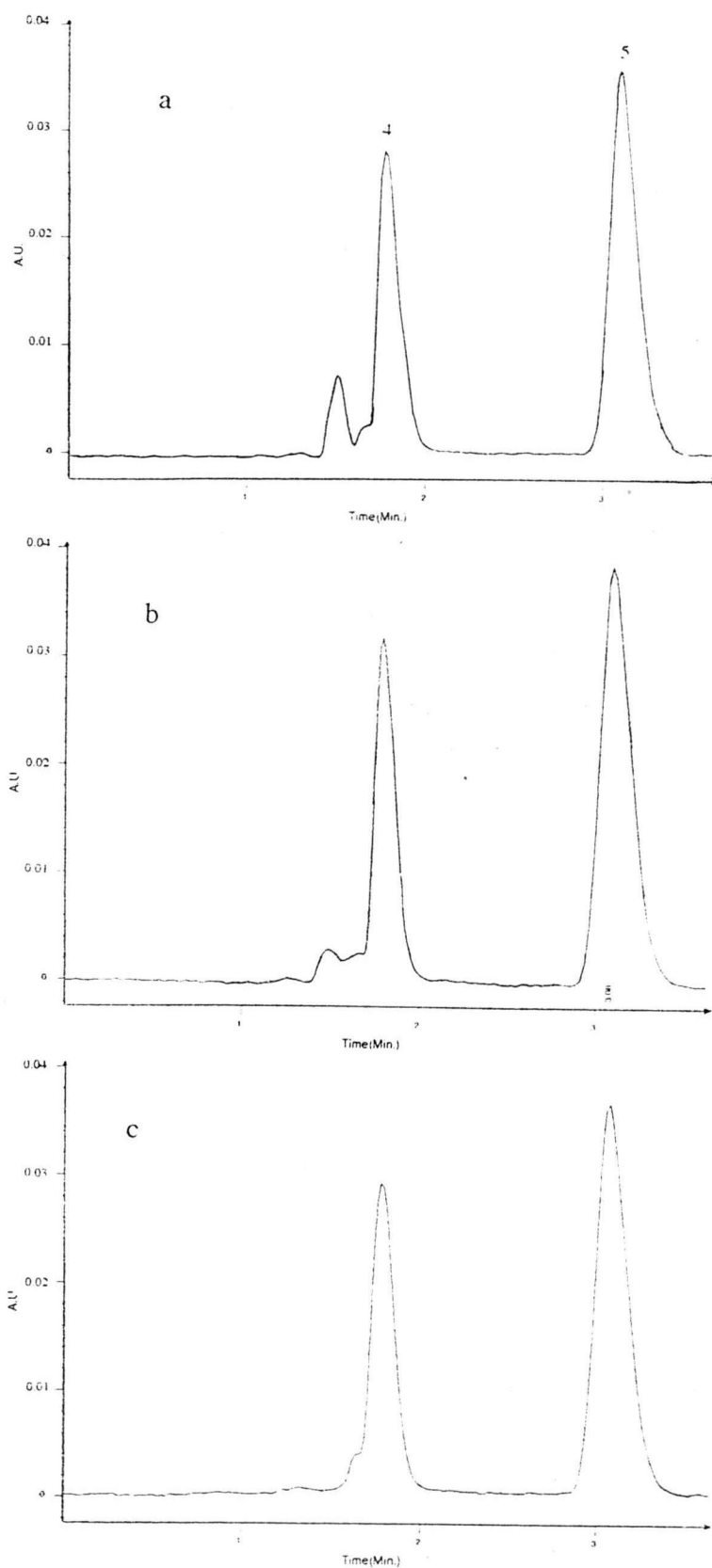


Figure A - 18 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in A - 15

APPENDIX B

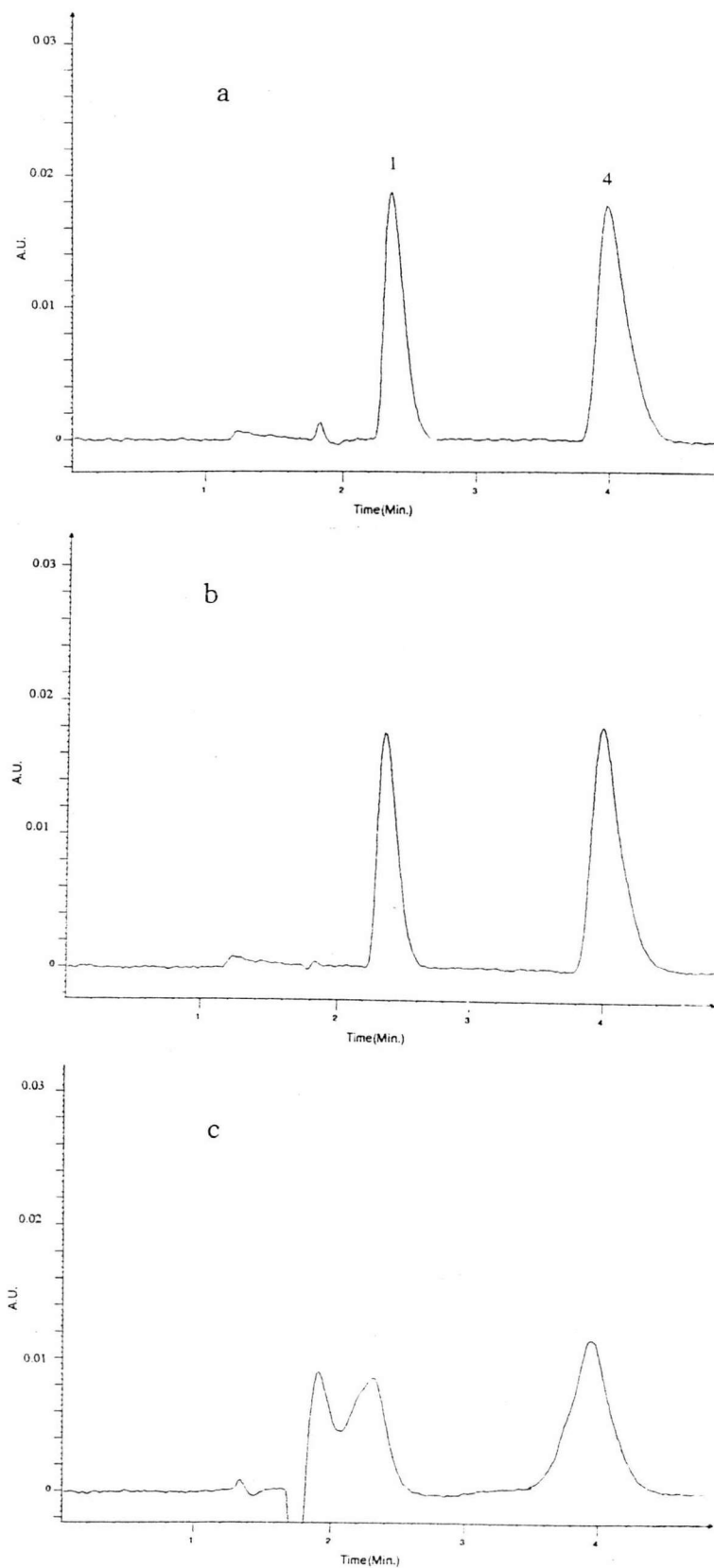


Figure B - 1 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 3.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

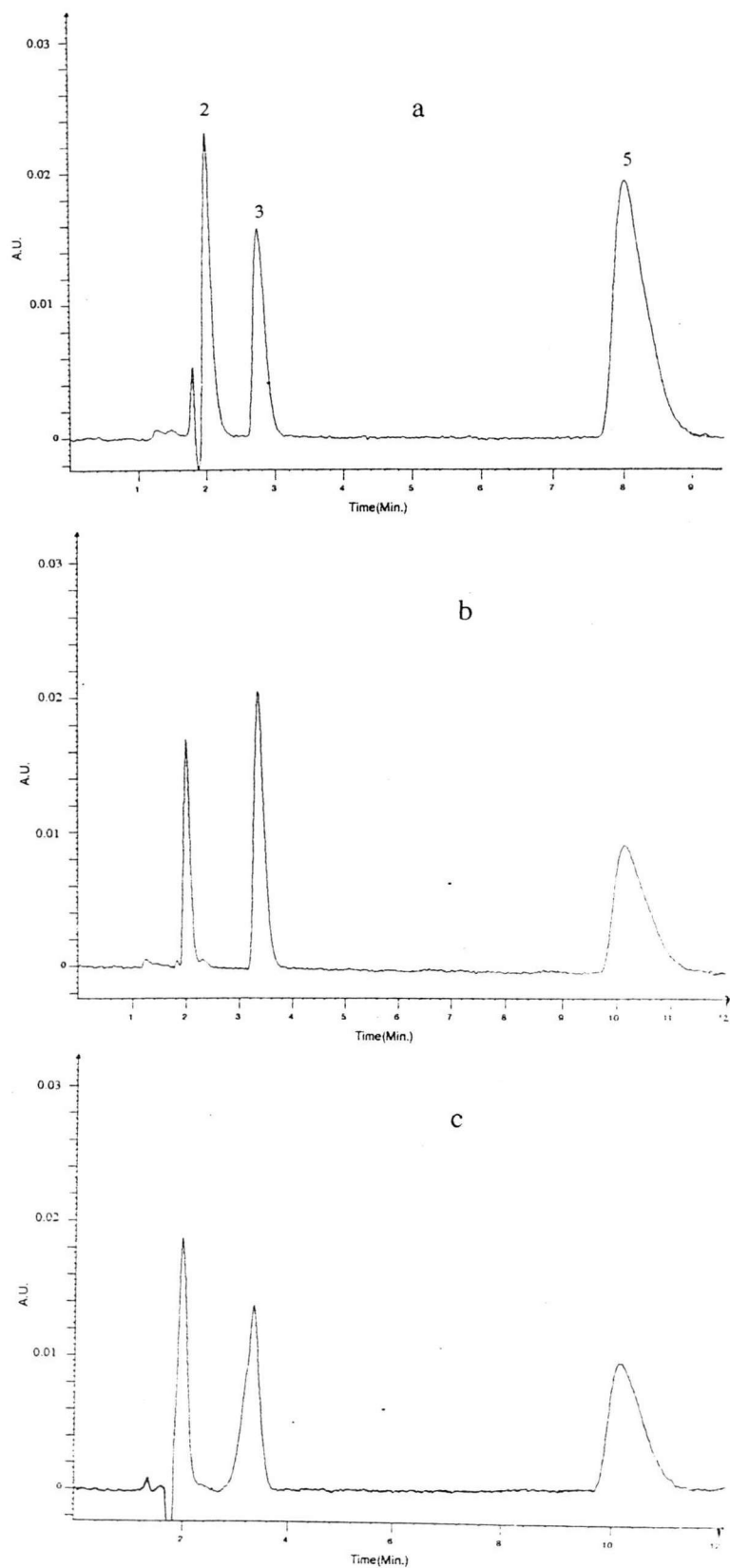


Figure B - 2 Chromatograms of standard mixtures of L-ascorbic acid (2), benzoic acid (3) and salicylic acid (5). Chromatographic conditions as given in B - 1

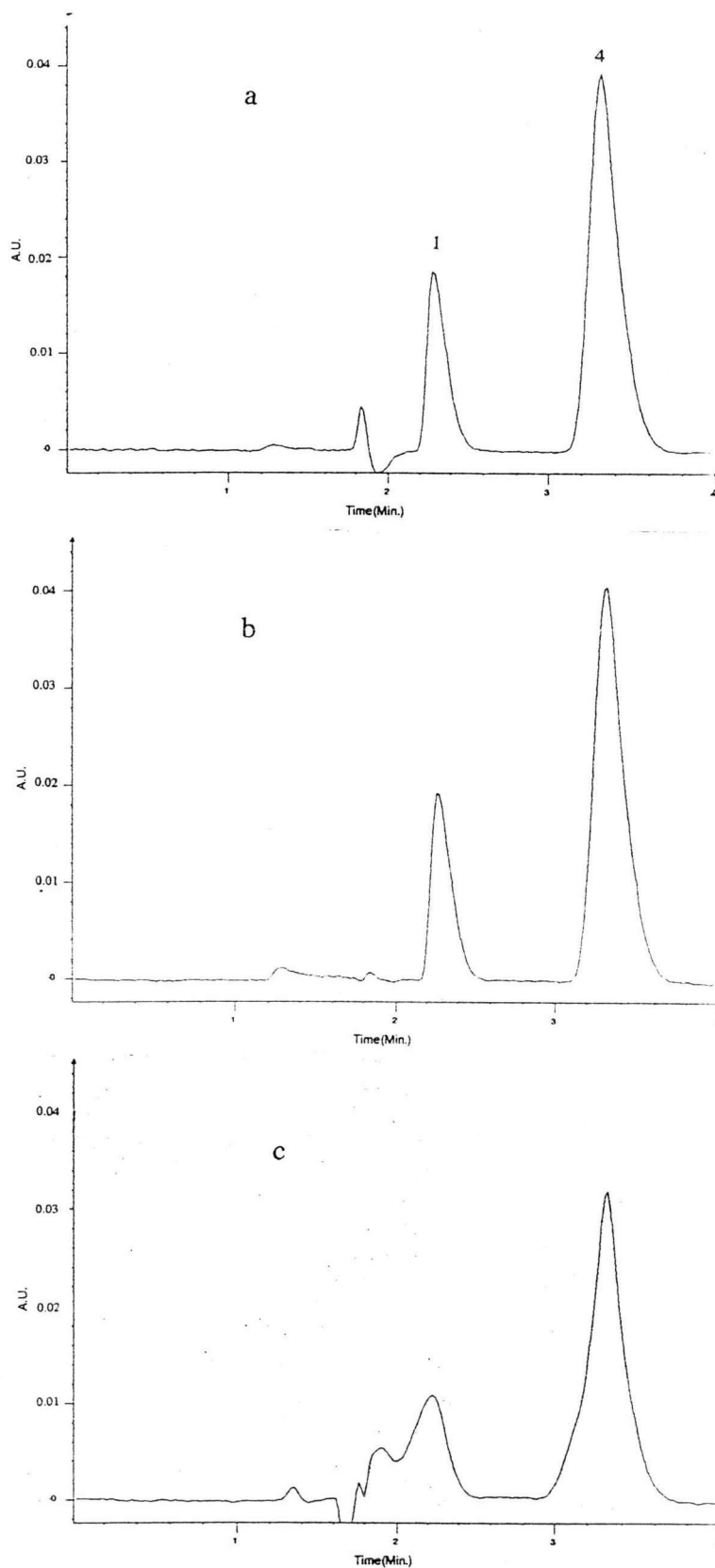


Figure B - 3 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 3.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

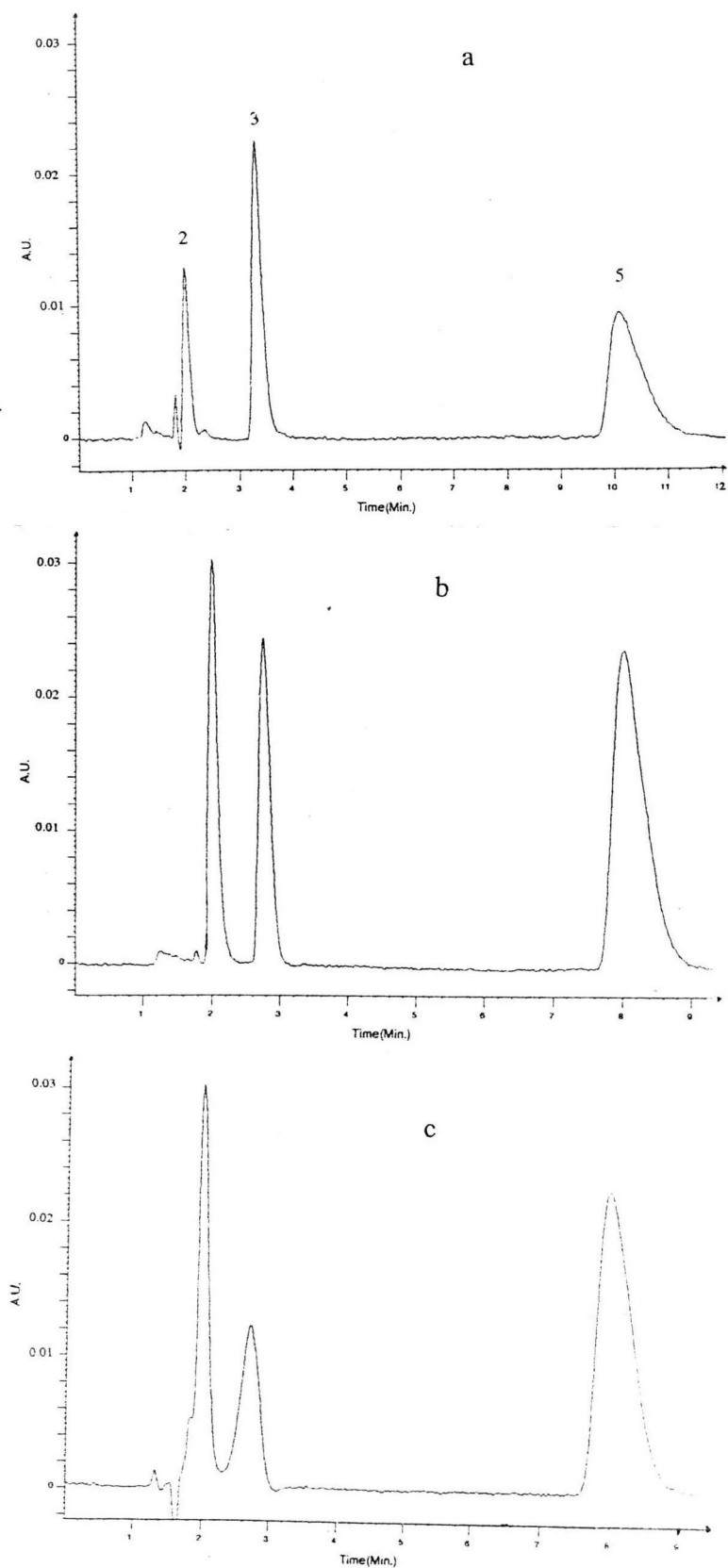


Figure B - 4 Chromatograms of standard mixtures of L-ascorbic acid (2), benzoic acid (3) and salicylic acid (5). Chromatographic conditions as given in B - 3

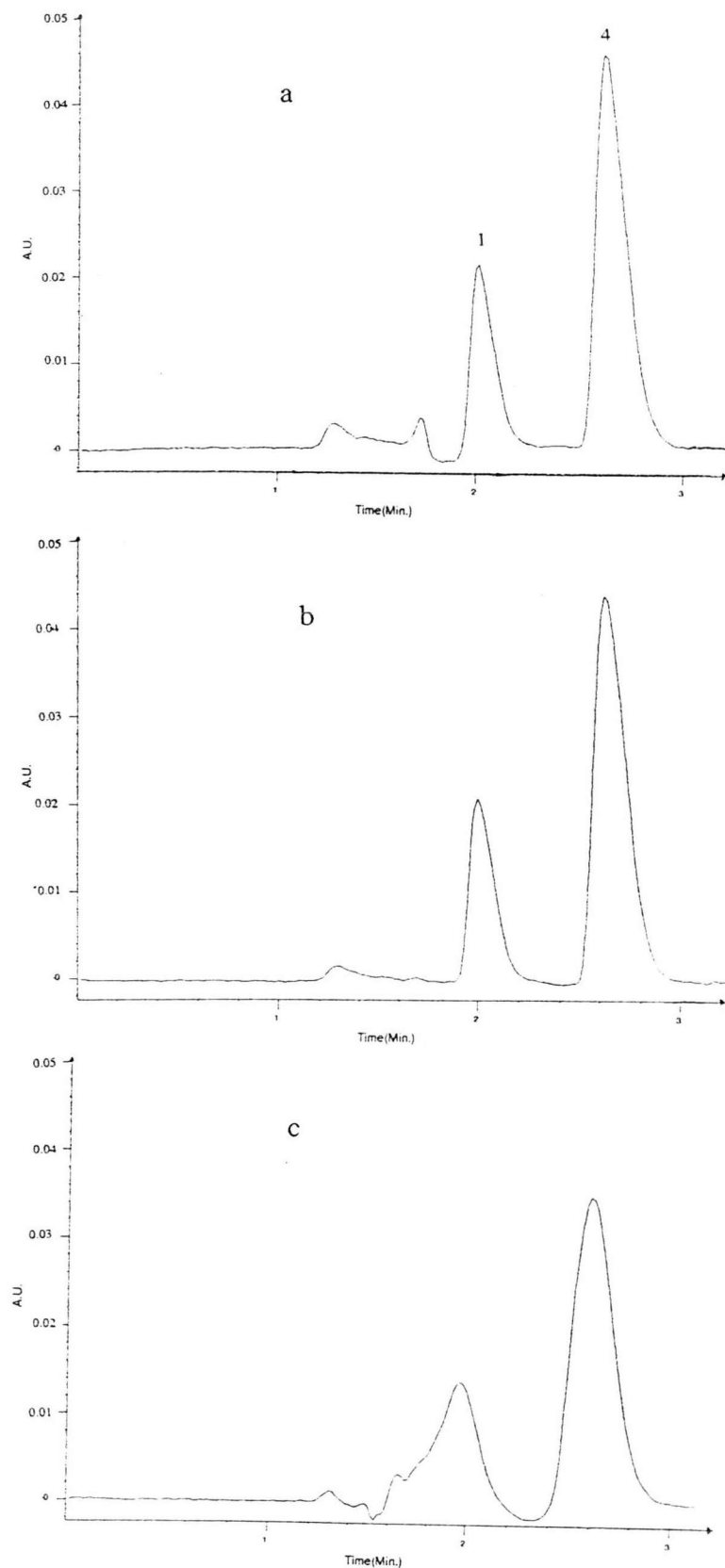


Figure B - 5 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 3.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

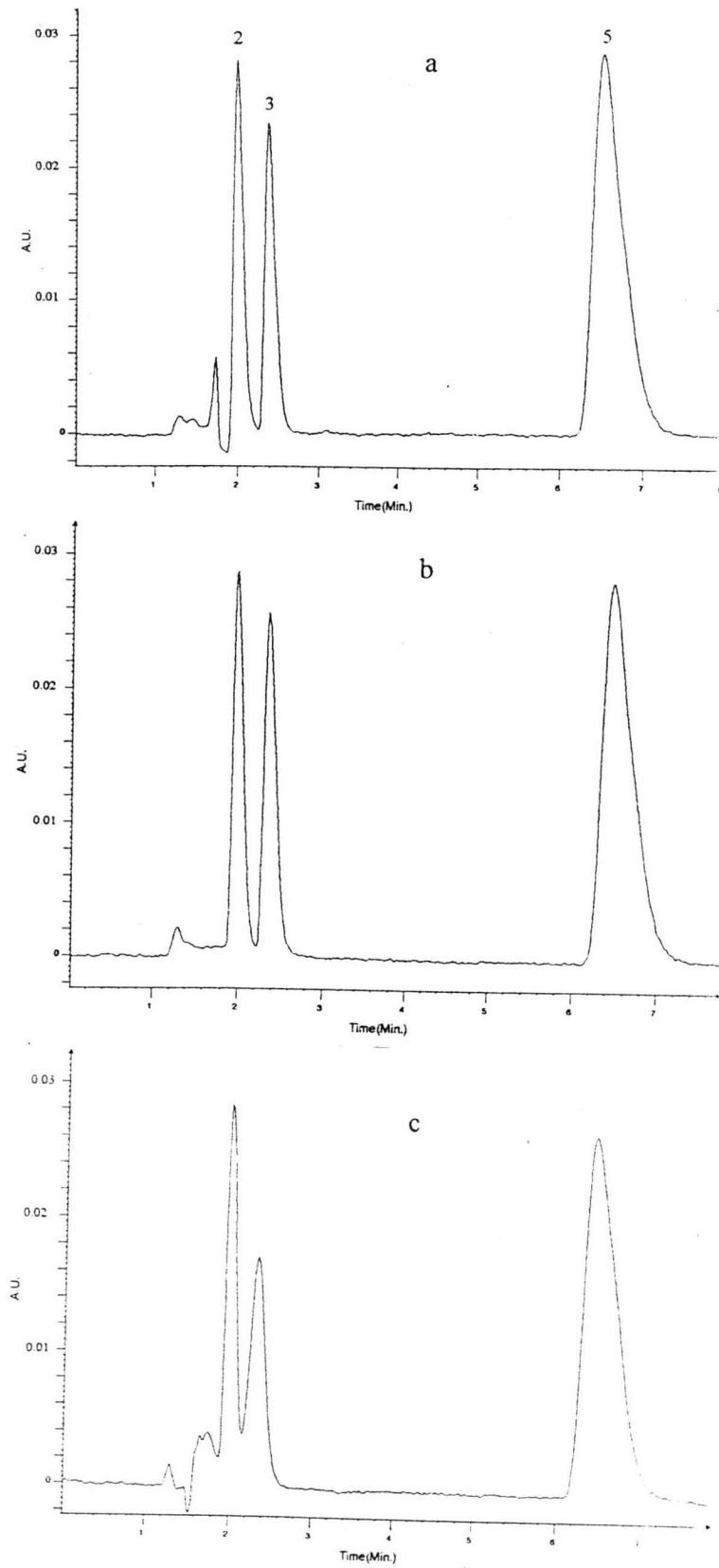


Figure B - 6 Chromatograms of standard mixtures of L-ascorbic acid (2), benzoic acid (3) and salicylic acid (5). Chromatographic conditions as given in B - 5

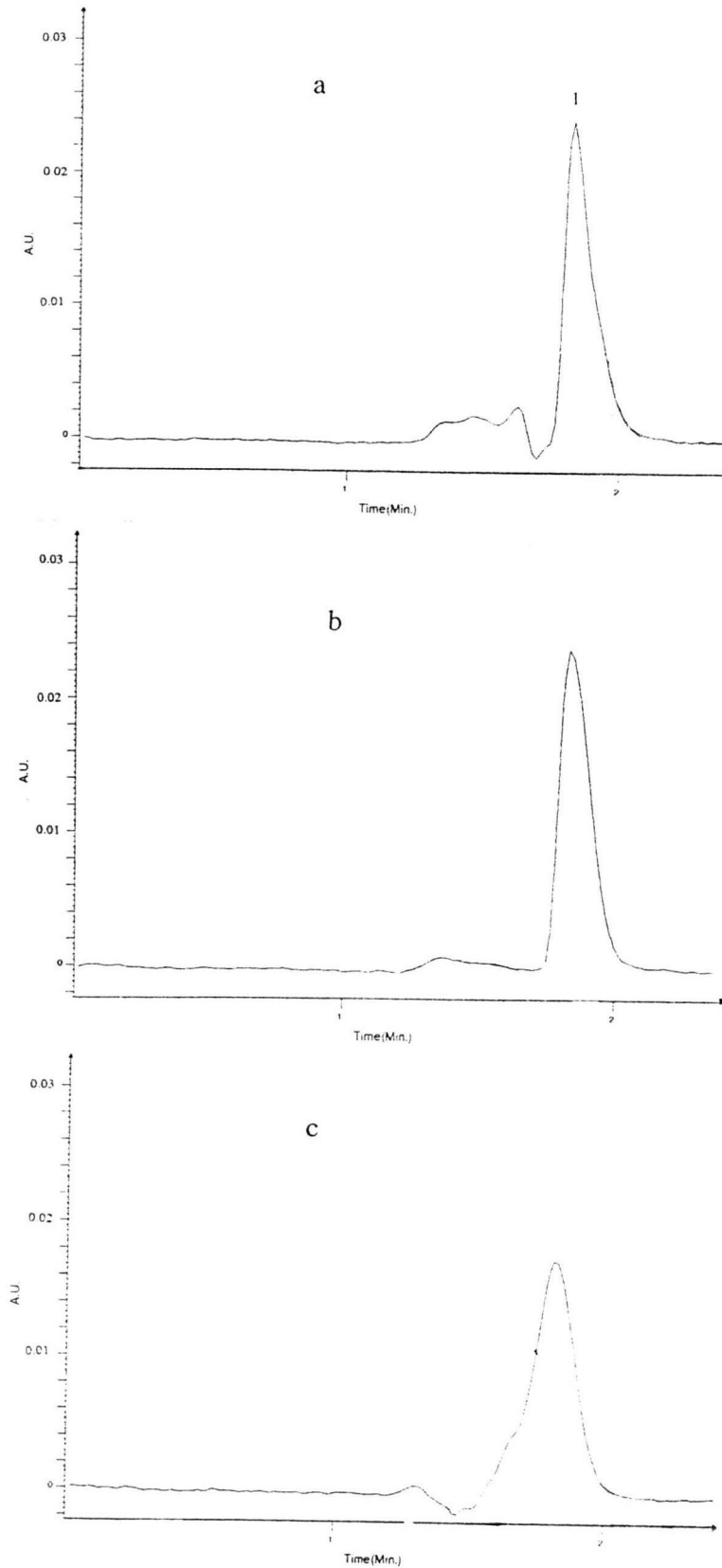


Figure B - 7 Chromatogram of standard phenol (1) at pH 3.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

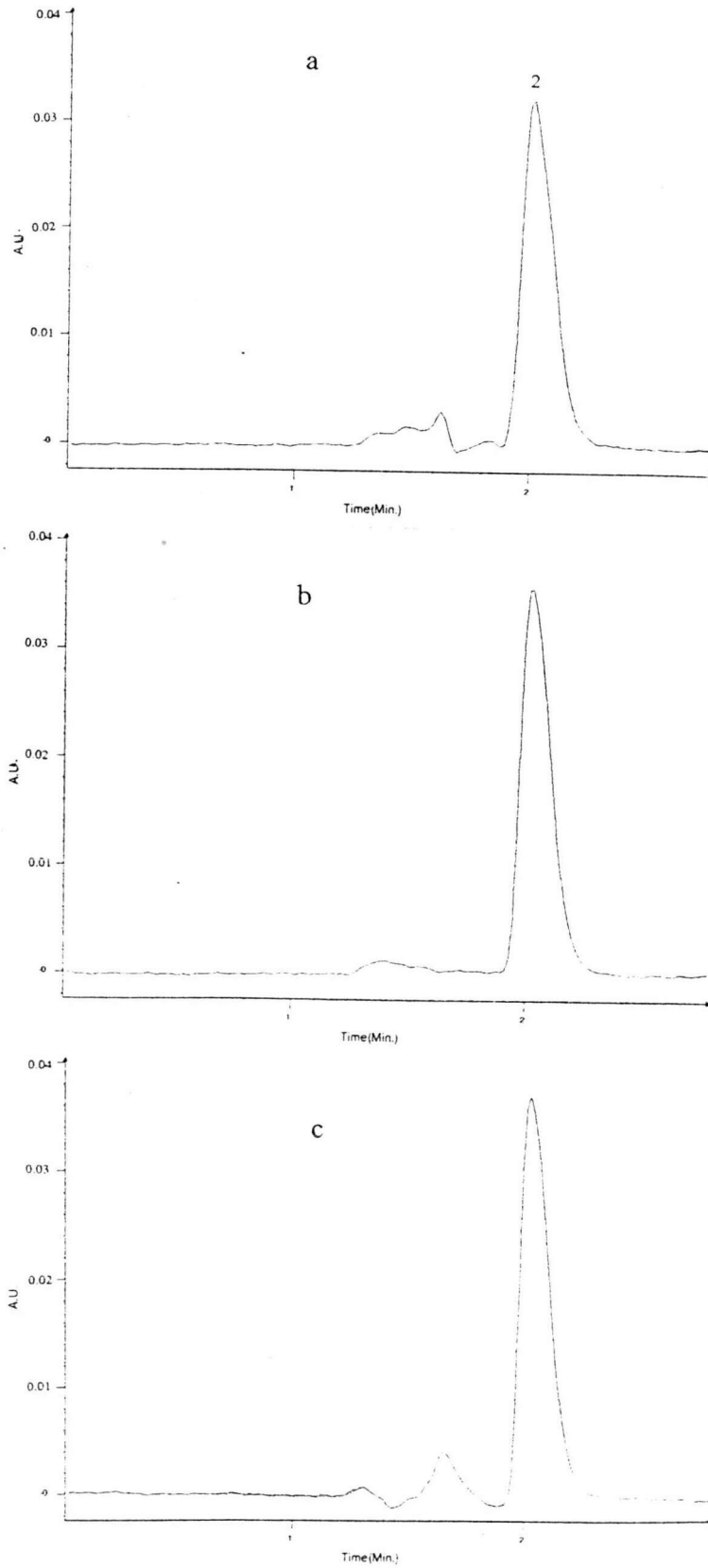


Figure B - 8 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in B - 7

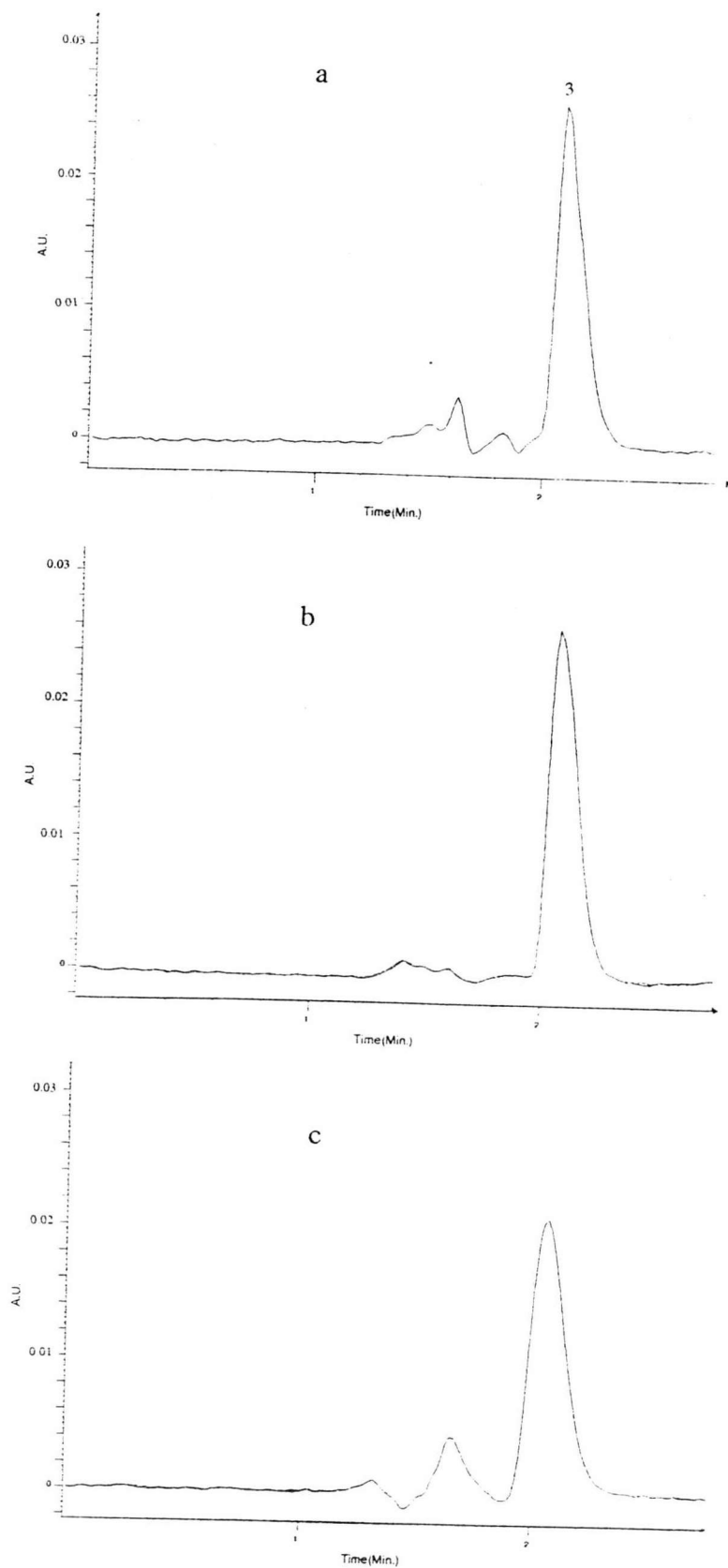


Figure B - 9 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in B - 7

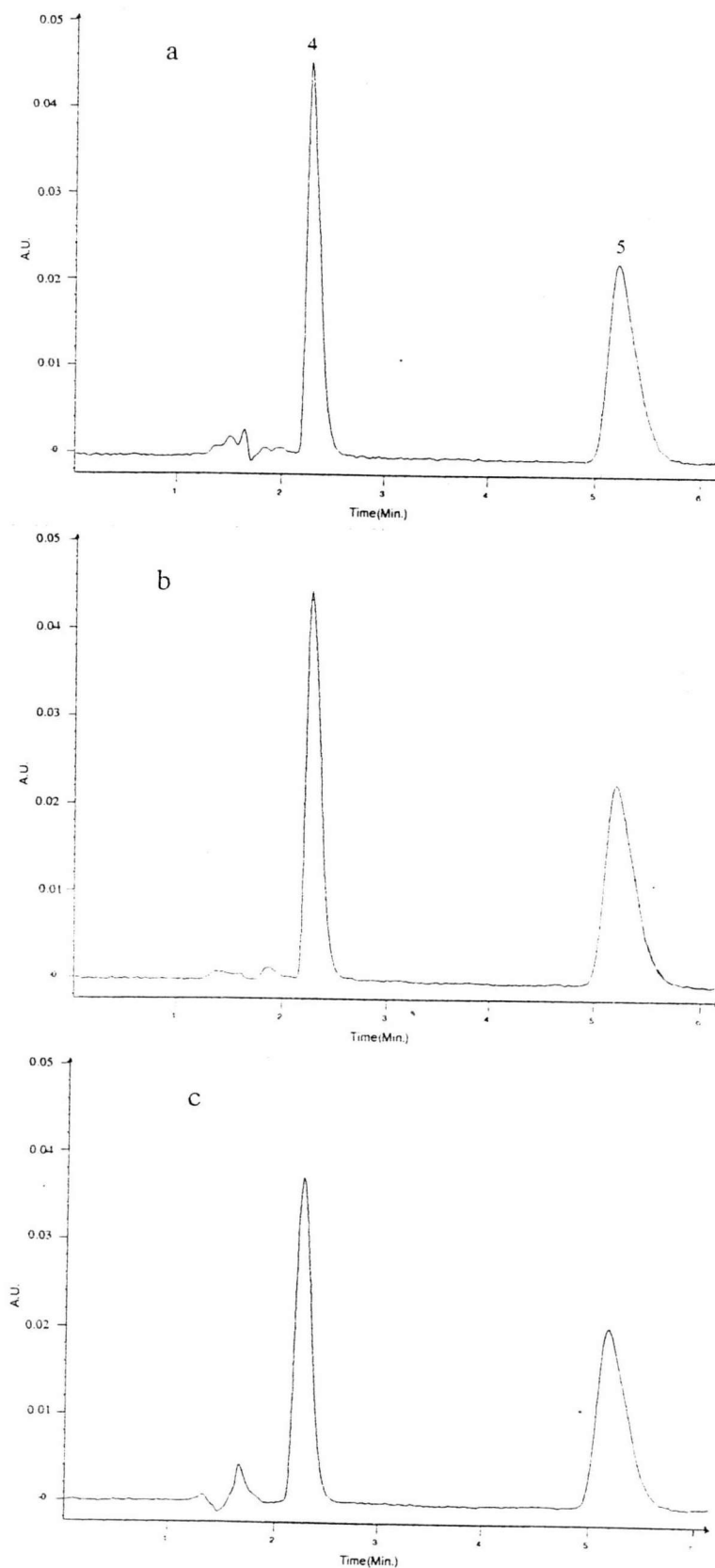


Figure B - 10 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in B - 7

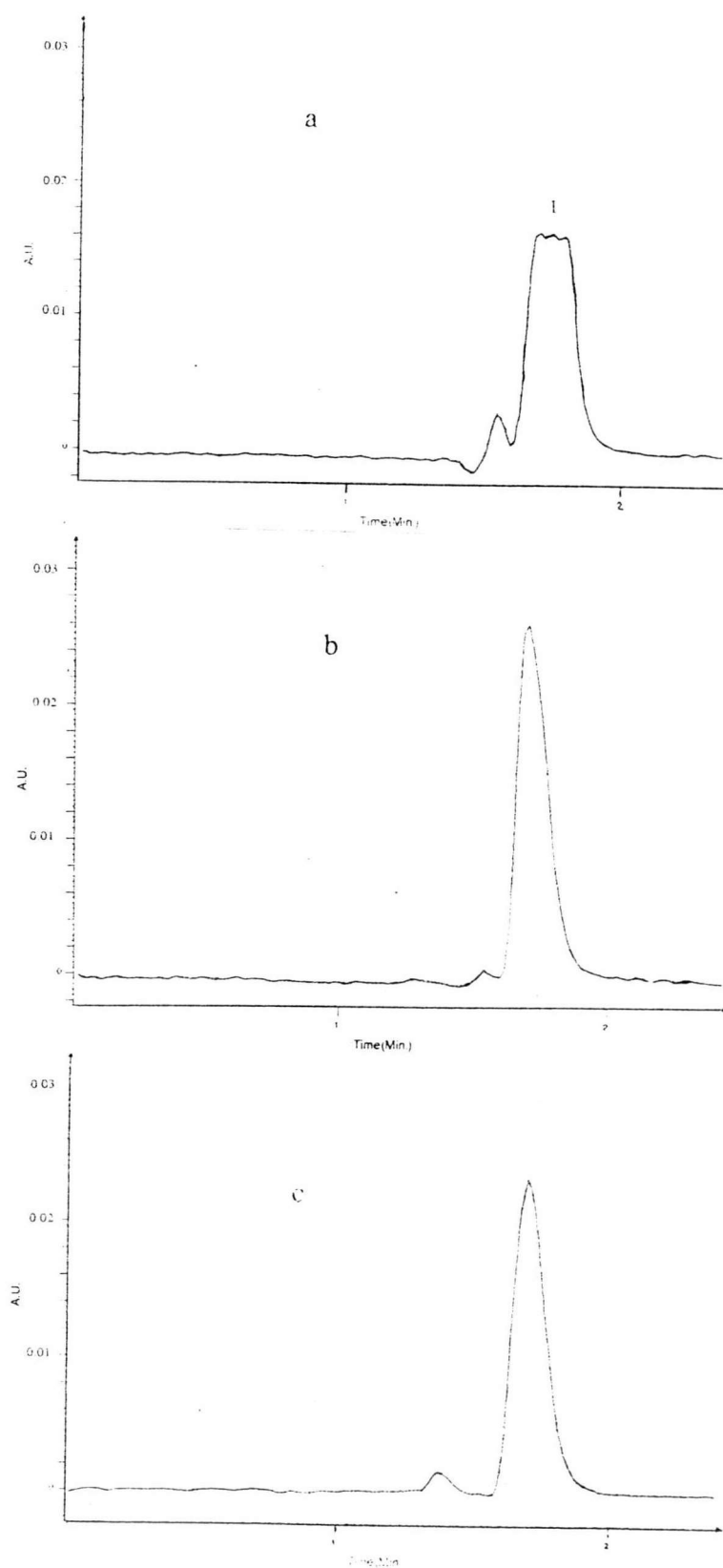


Figure B - 11 Chromatogram of standard phenol (1) at pH 3.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

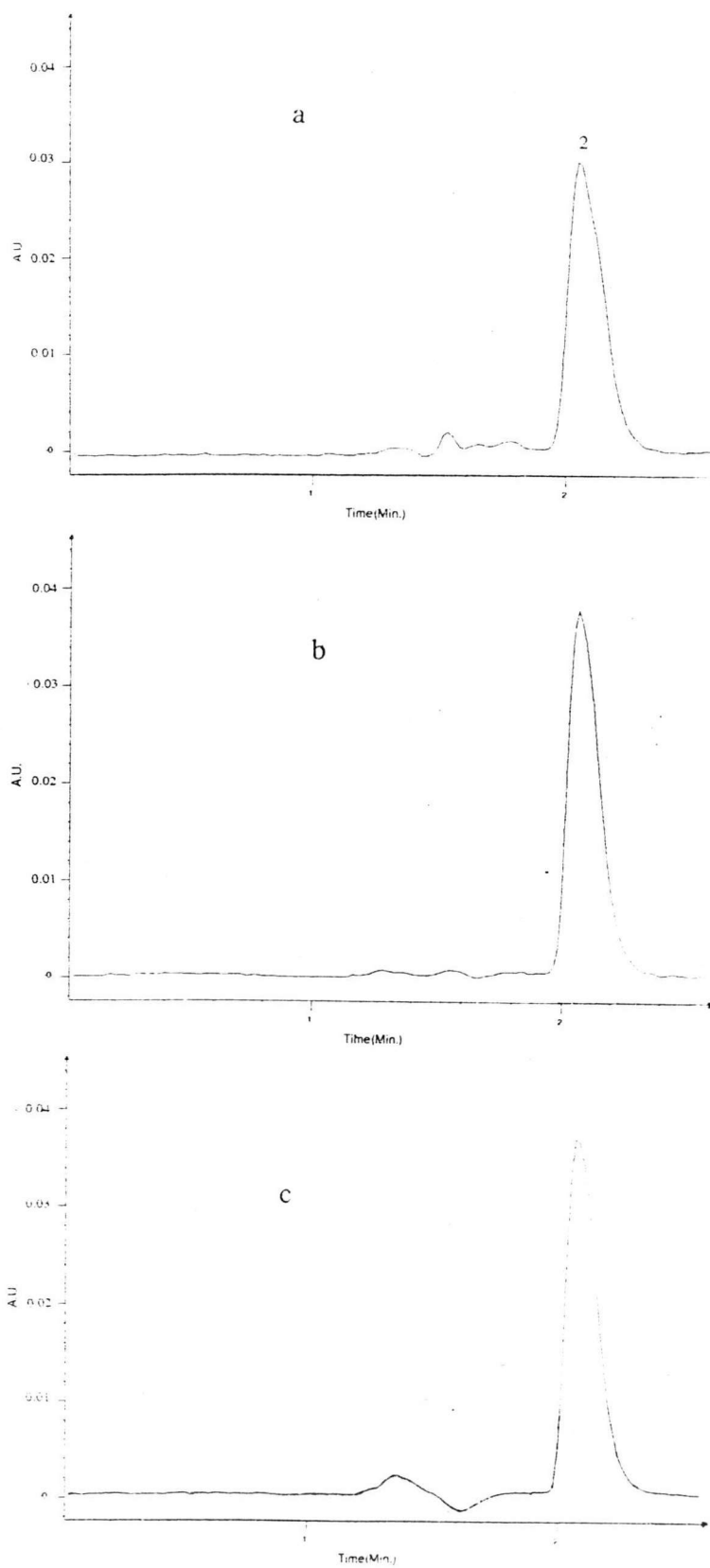


Figure B - 12 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in B - 11

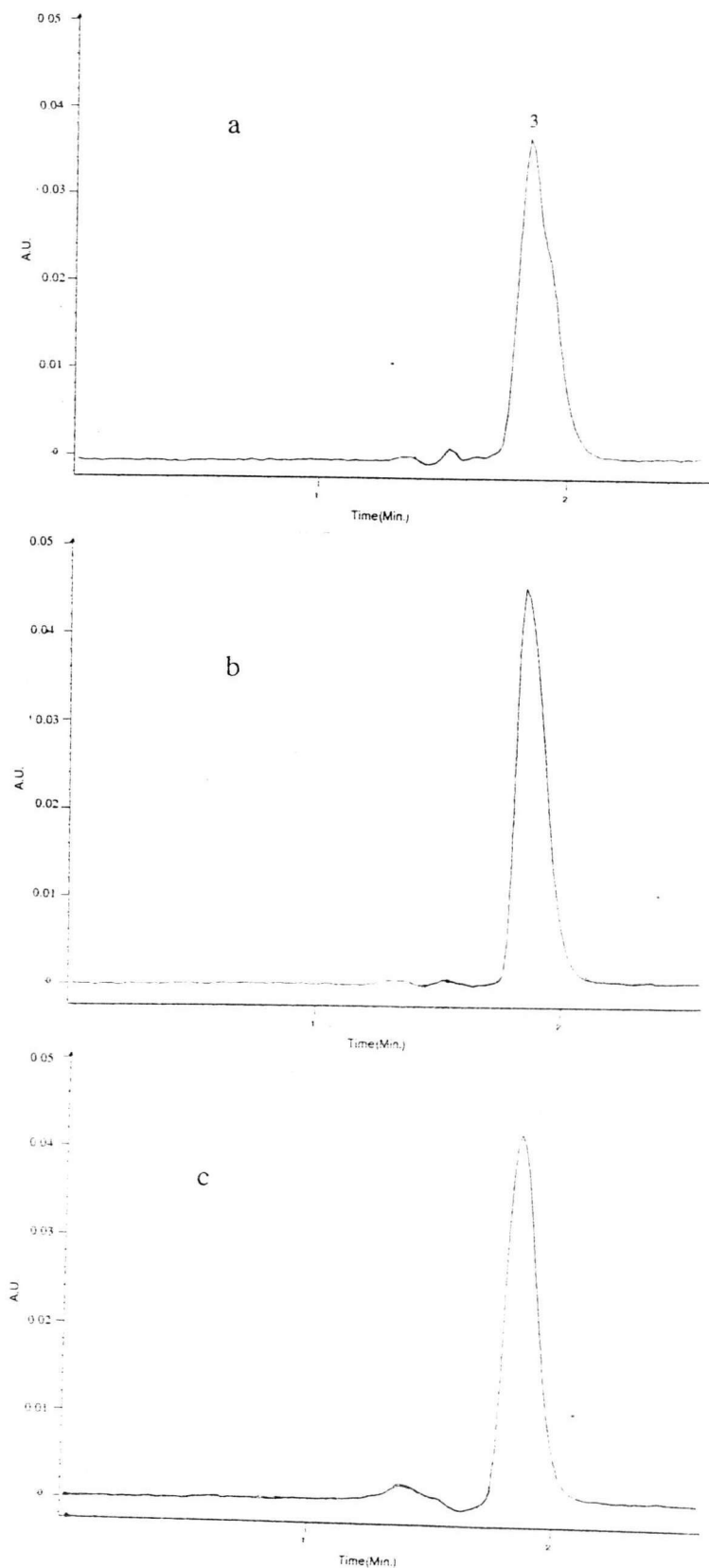


Figure B - 13 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in B - 11

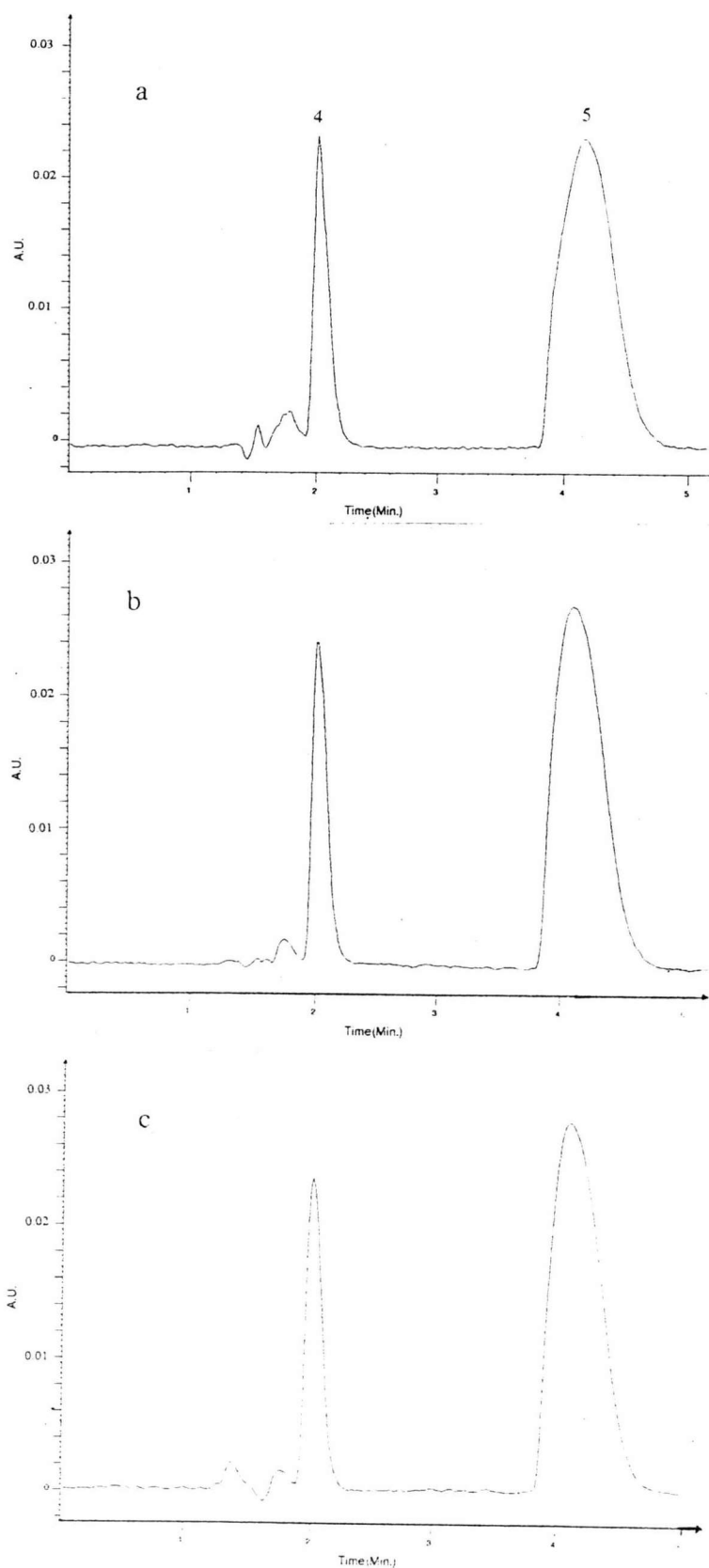


Figure B - 14 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in B - 11

APPENDIX C

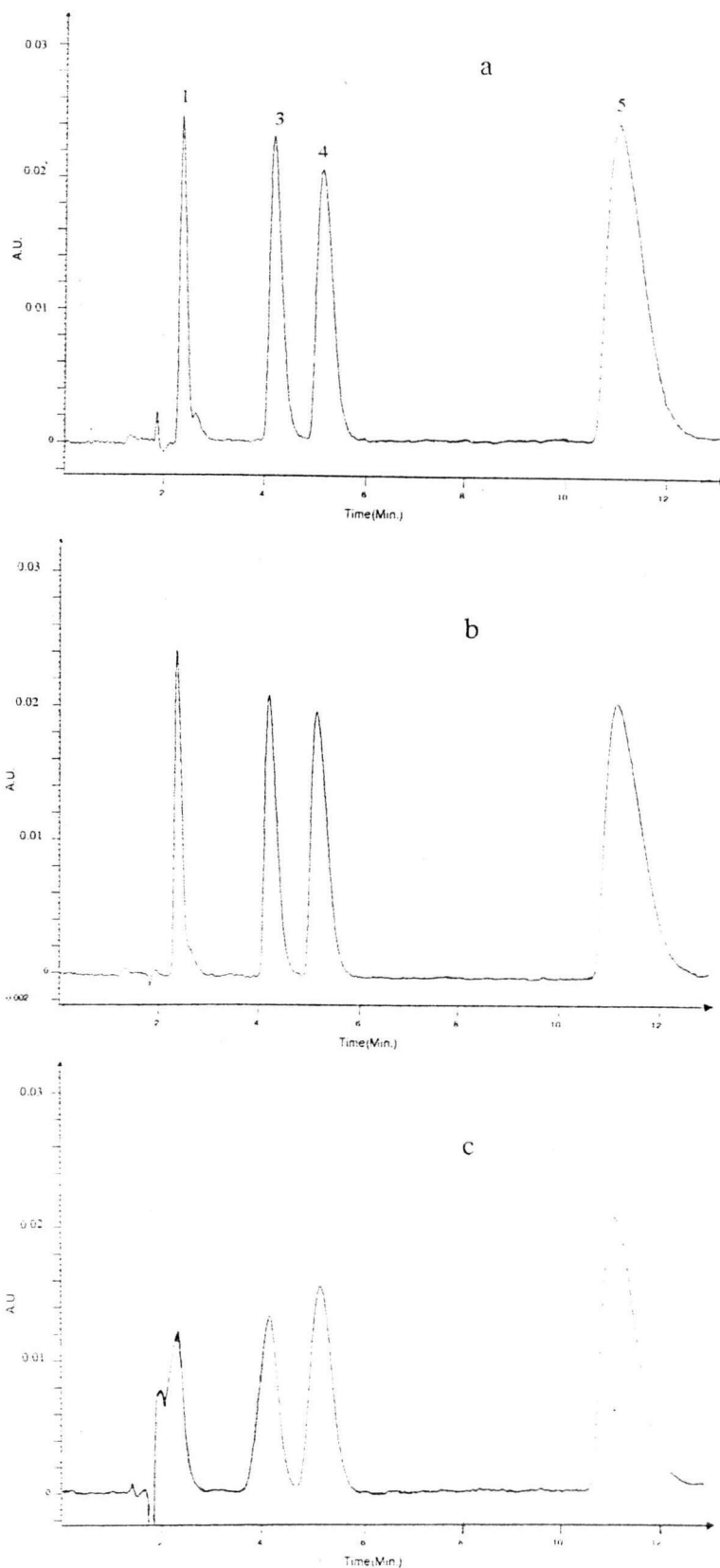


Figure C - 1 Chromatograms of standard mixtures of phenol (1), benzoic acid (2), acetylsalicylic acid (4) and salicylic acid (5) at pH 3.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

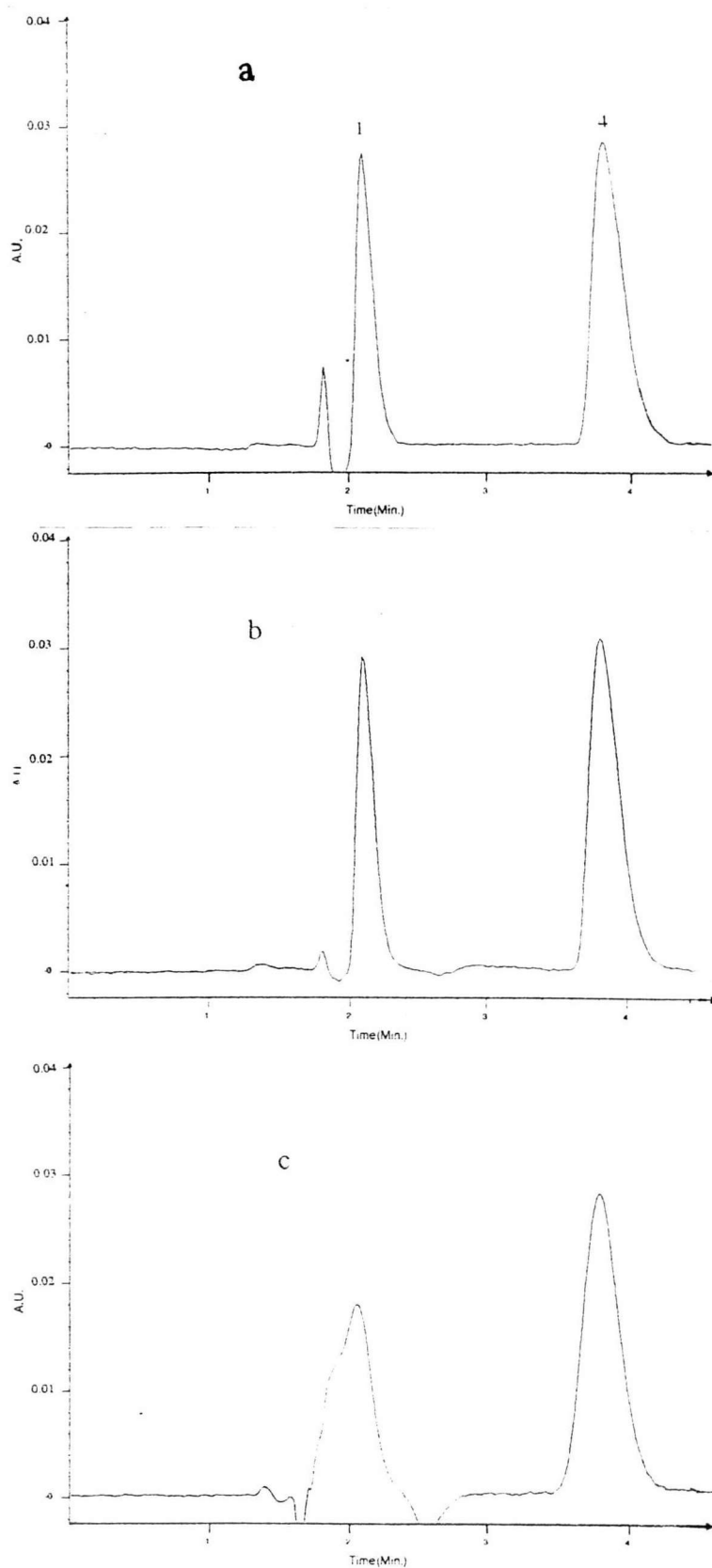


Figure C - 2 Chromatograms of standard L-ascorbic acid (2). Chromatographic conditions as given in C - 1

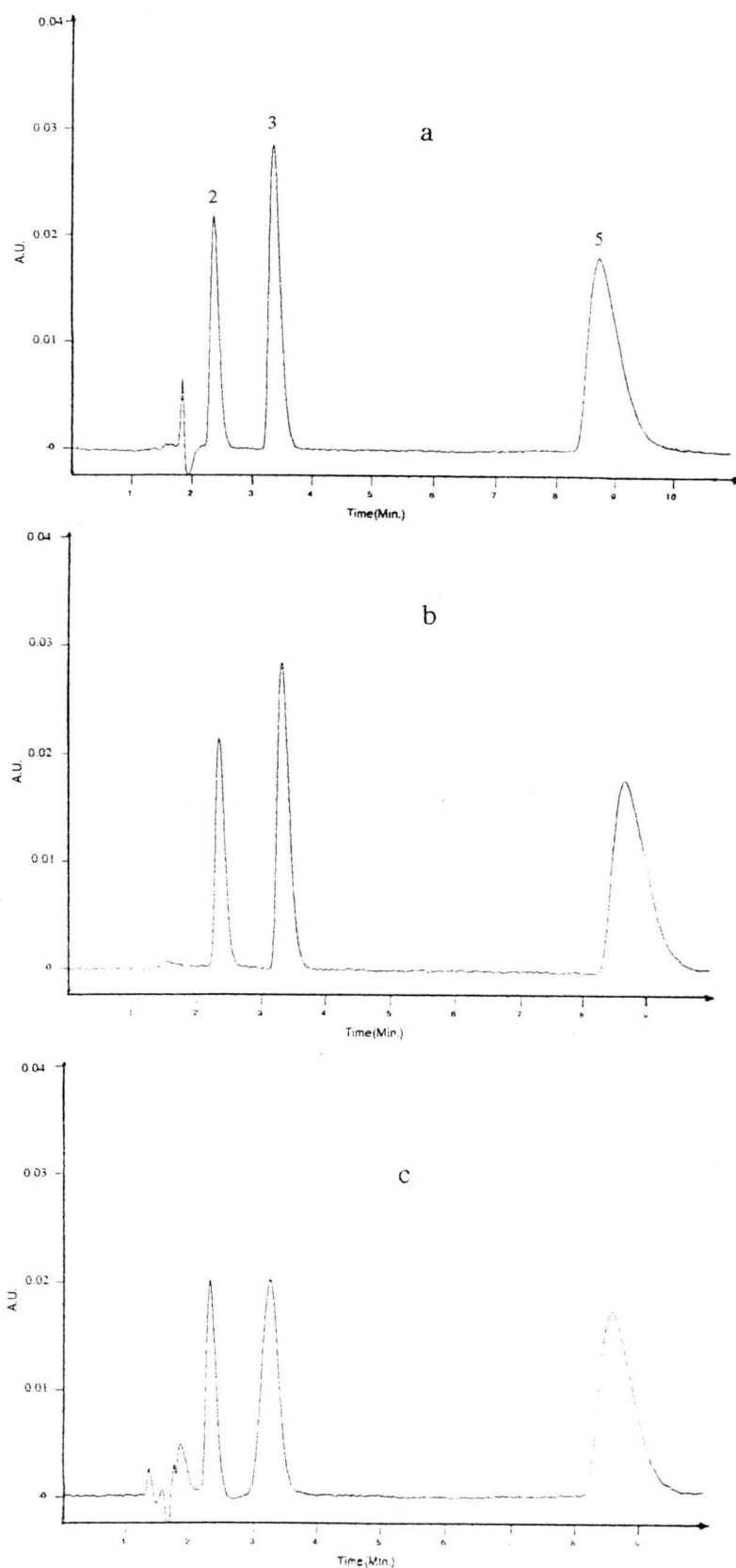


Figure C - 3 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 3.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

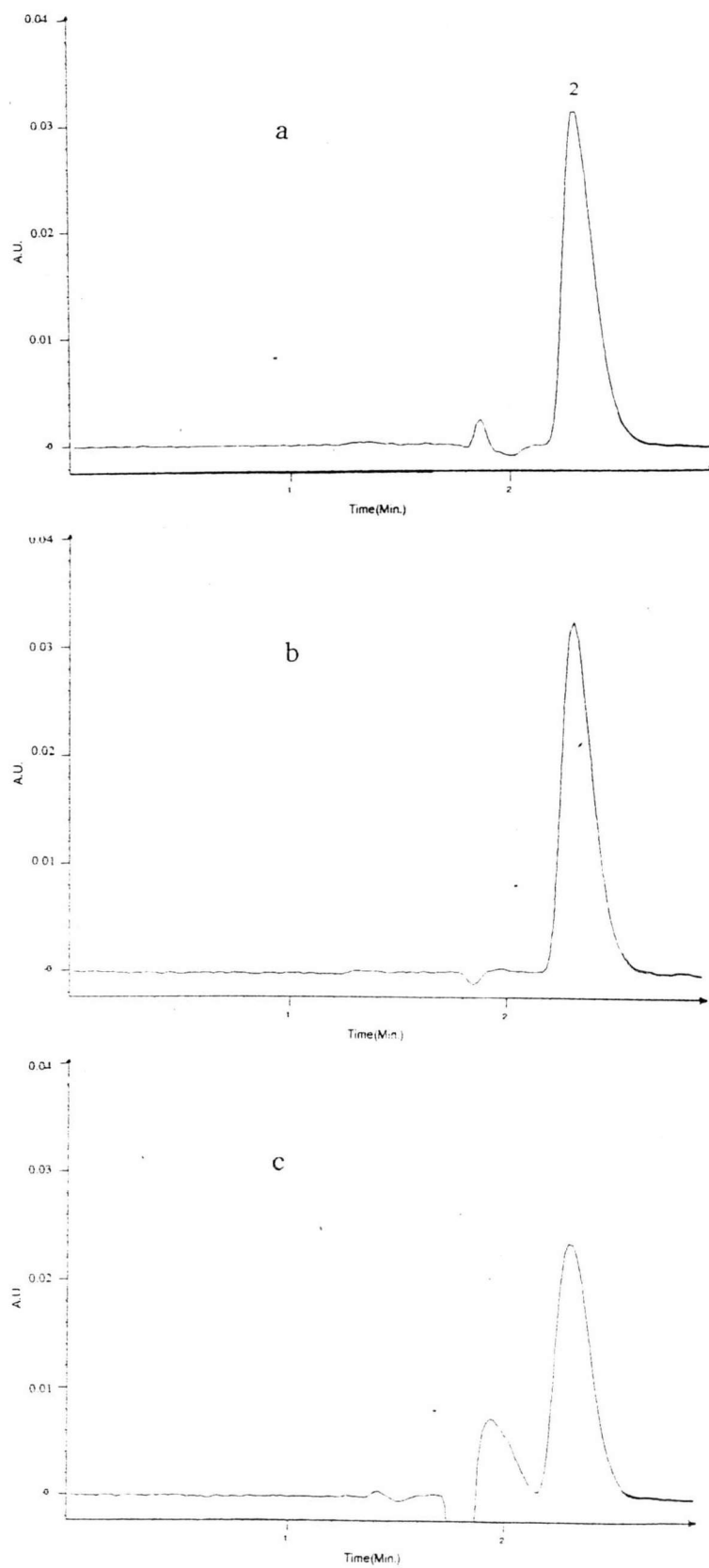


Figure C - 4 Chromatograms of standard mixtures of L-ascorbic acid (2), benzoic acid (3) and salicylic acid (5). Chromatographic conditions as given in C - 3

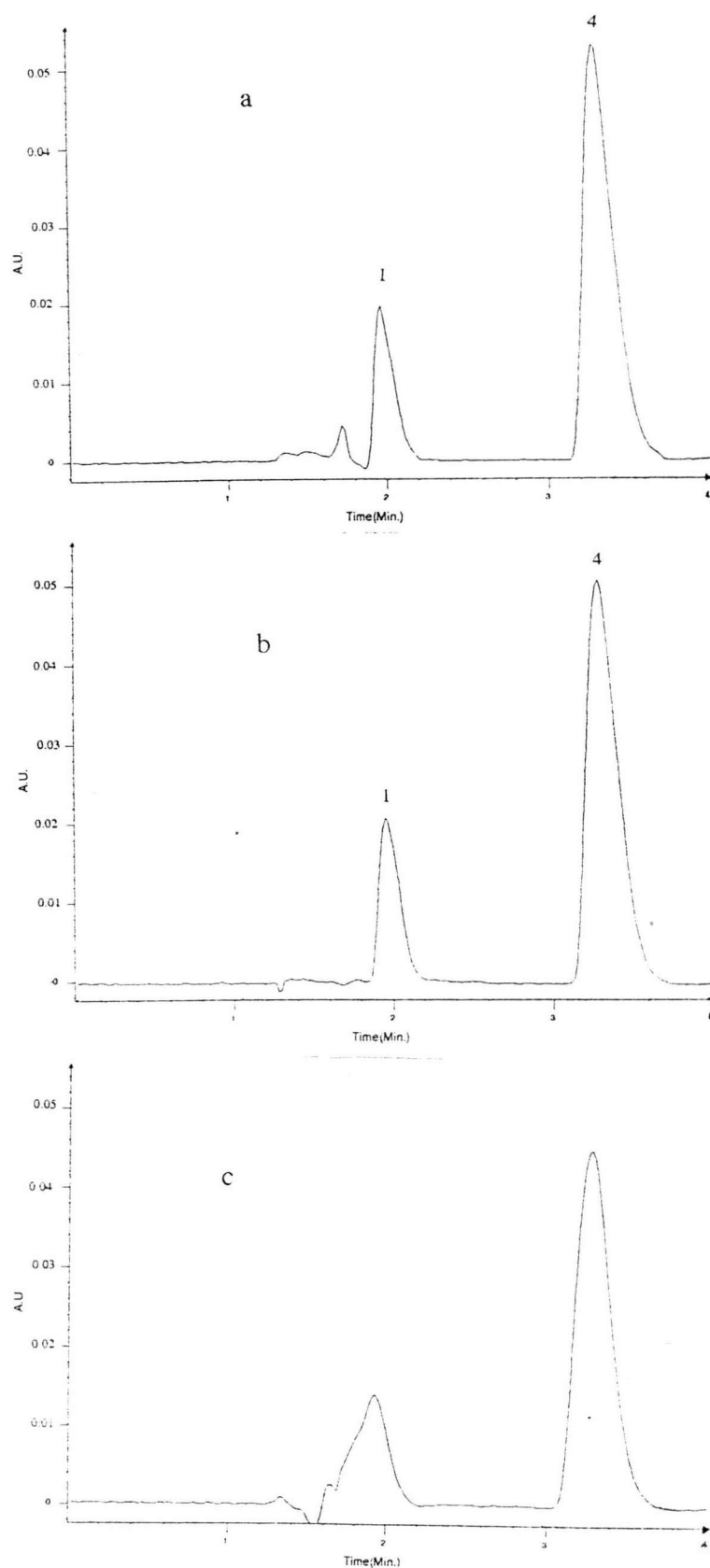


Figure C - 5 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 3.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

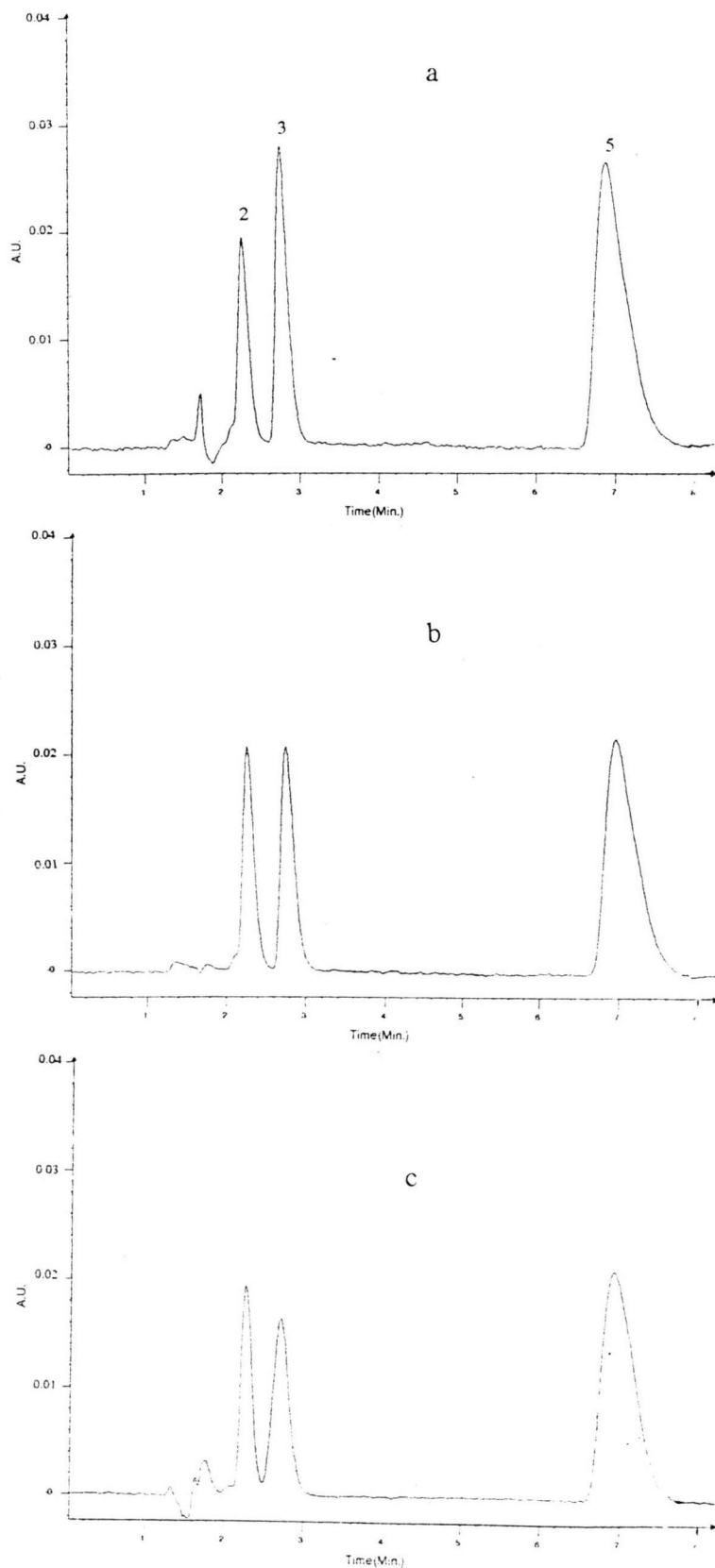


Figure C - 6 Chromatograms of standard mixtures of L-ascorbic acid (2), benzoic acid (3) and salicylic acid (5). Chromatographic conditions as given in C - 4

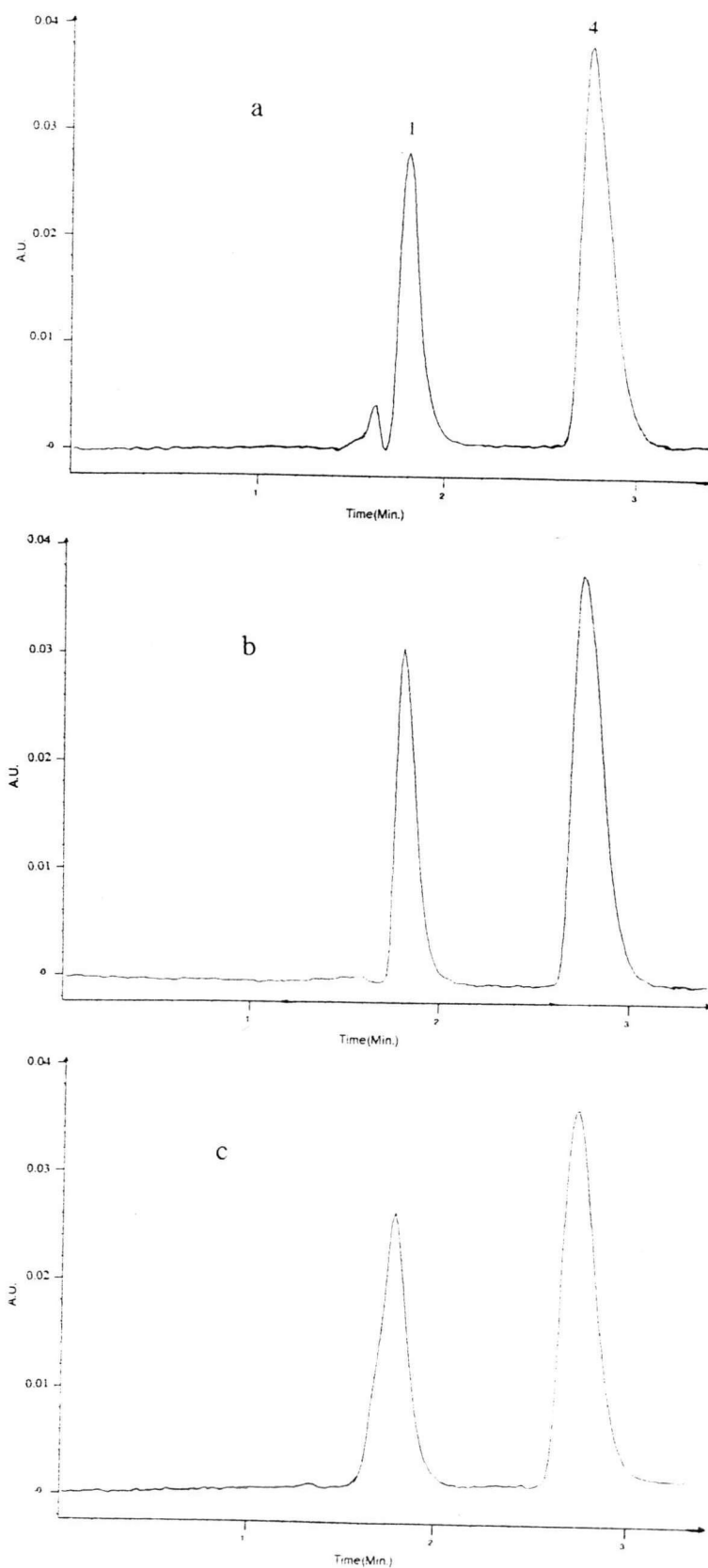


Figure C - 7 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 3.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

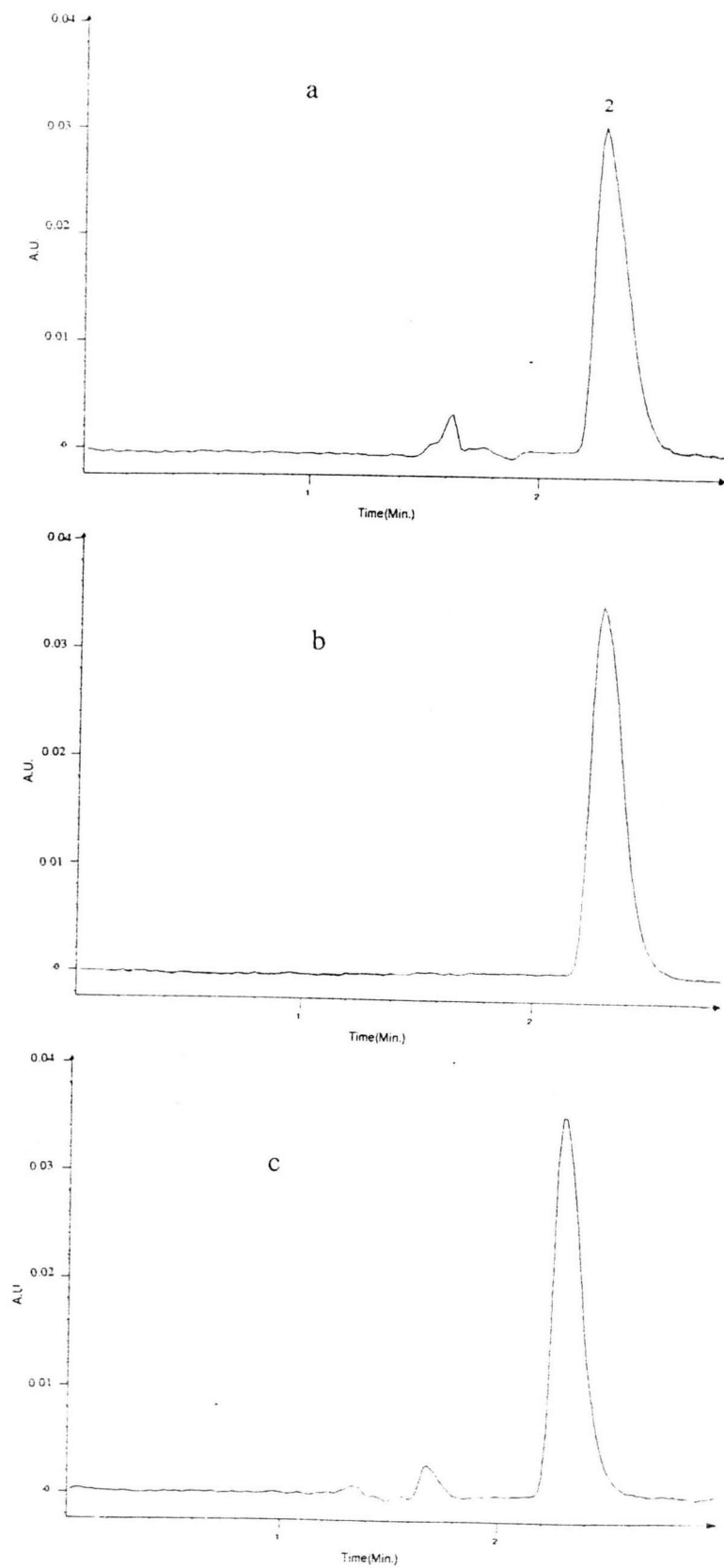


Figure C - 8 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in C - 7

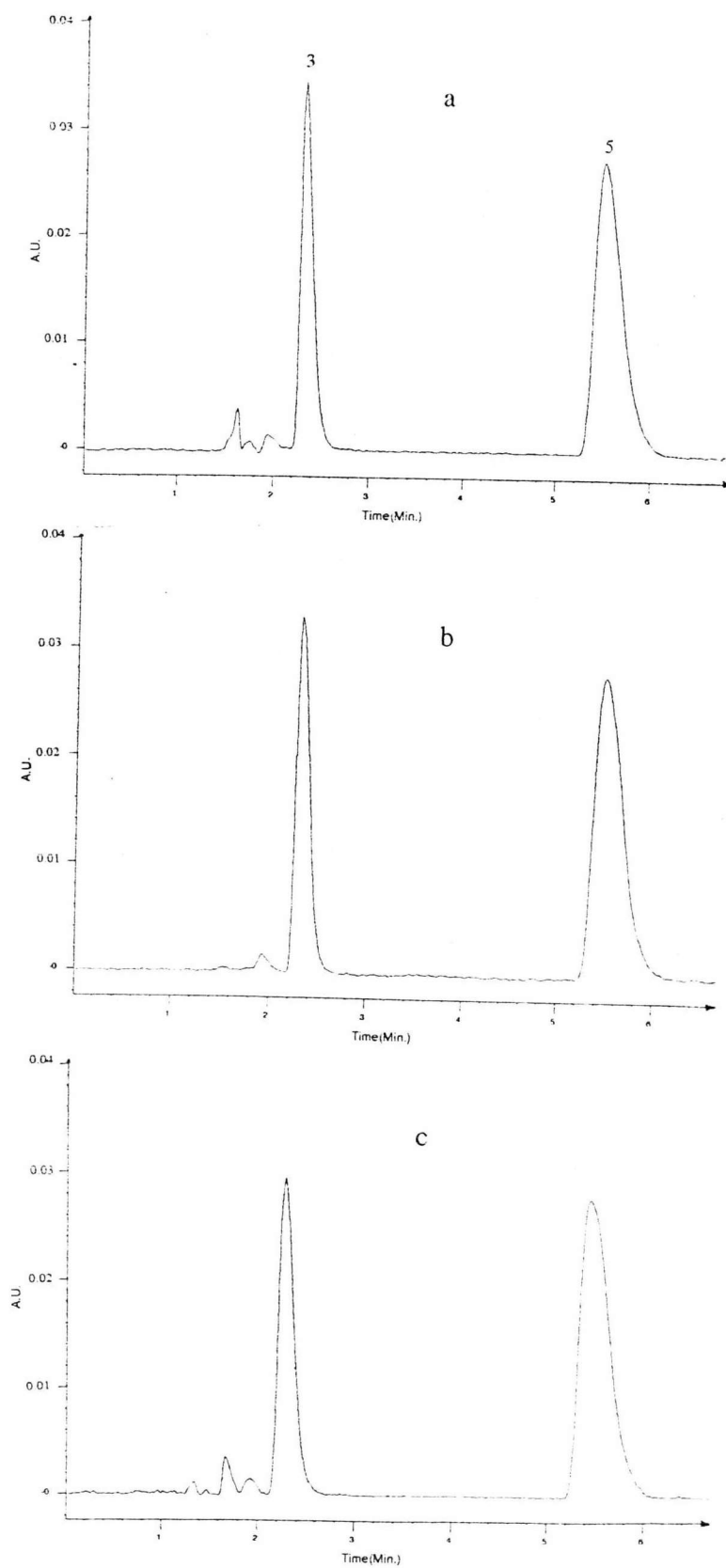


Figure C - 9 Chromatograms of standard mixtures of benzoic acid (3) and salicylic acid (5). Chromatographic conditions as given in C - 7

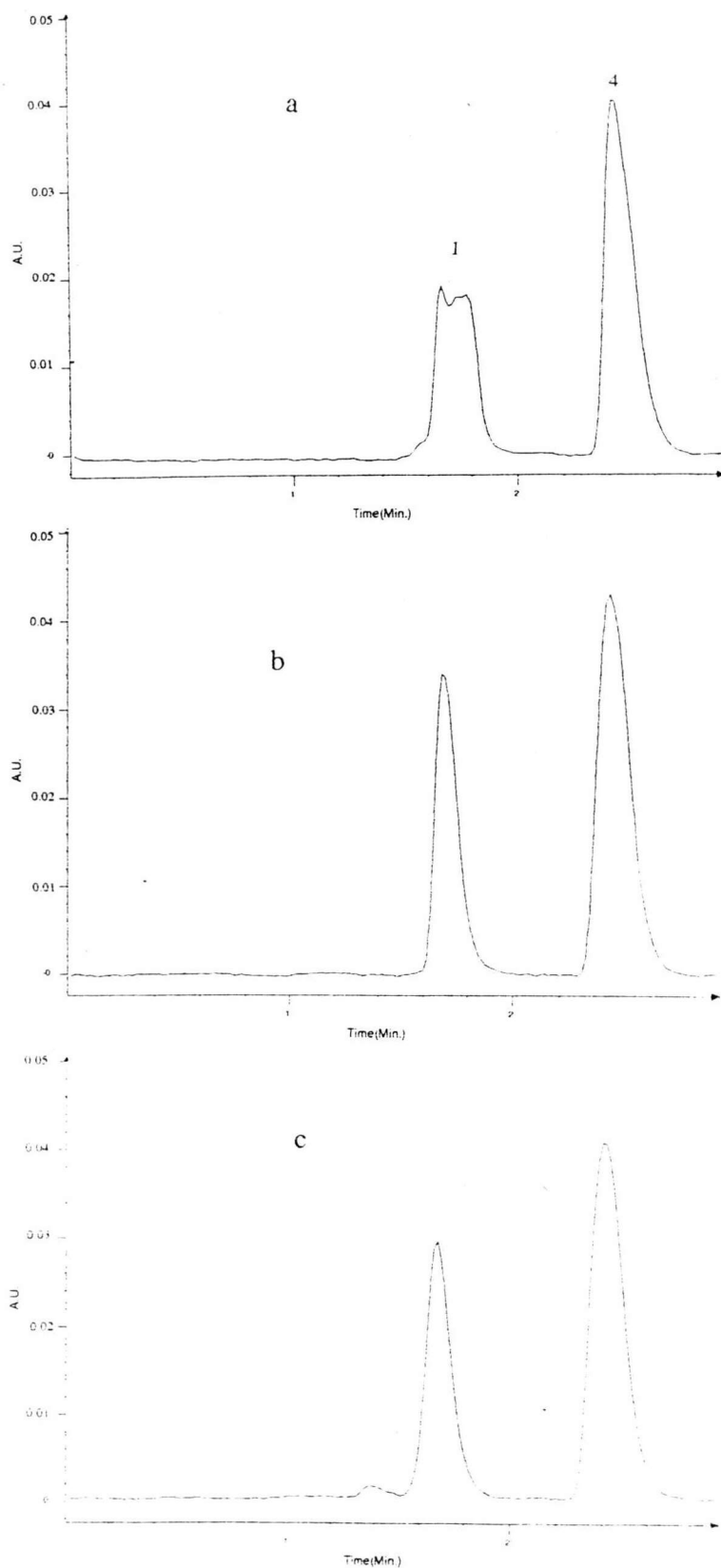


Figure C - 10 Chromatograms of standard mixtures of phenol (1) and acetylsalicylic acid (4) at pH 3.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

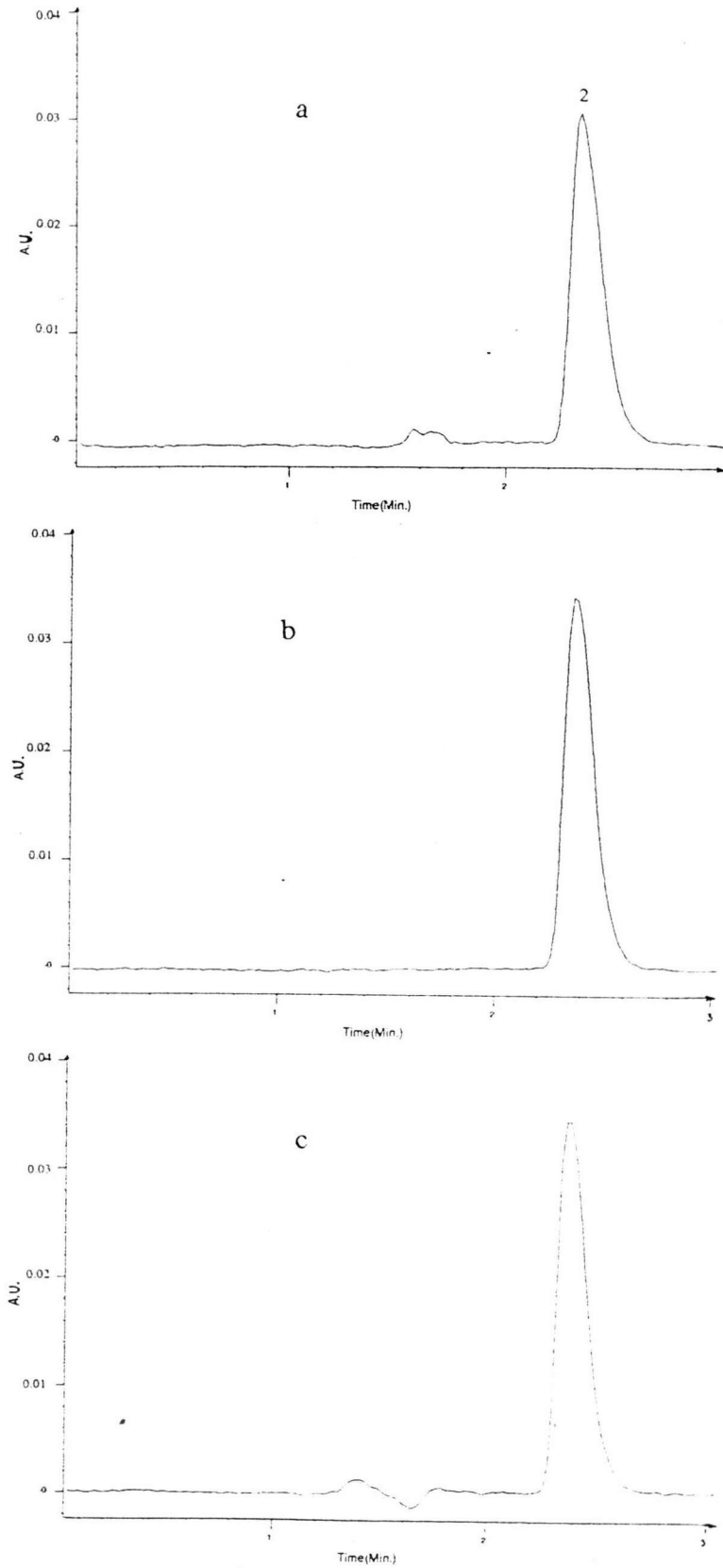


Figure C - 11 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in C - 10

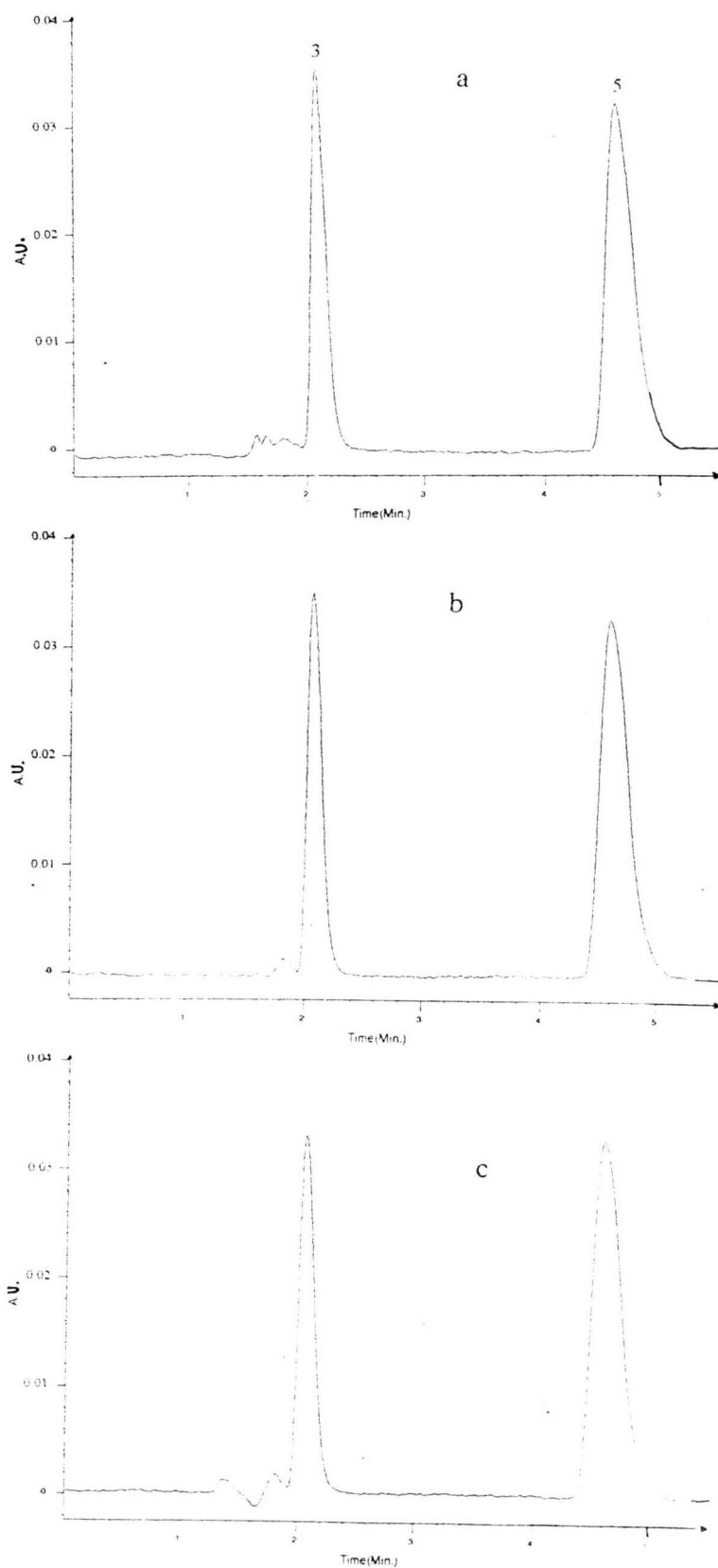


Figure C - 12 Chromatograms of standard mixtures of benzoic acid (3) and salicylic acid (5). Chromatographic conditions as given in C - 10

APPENDIX D

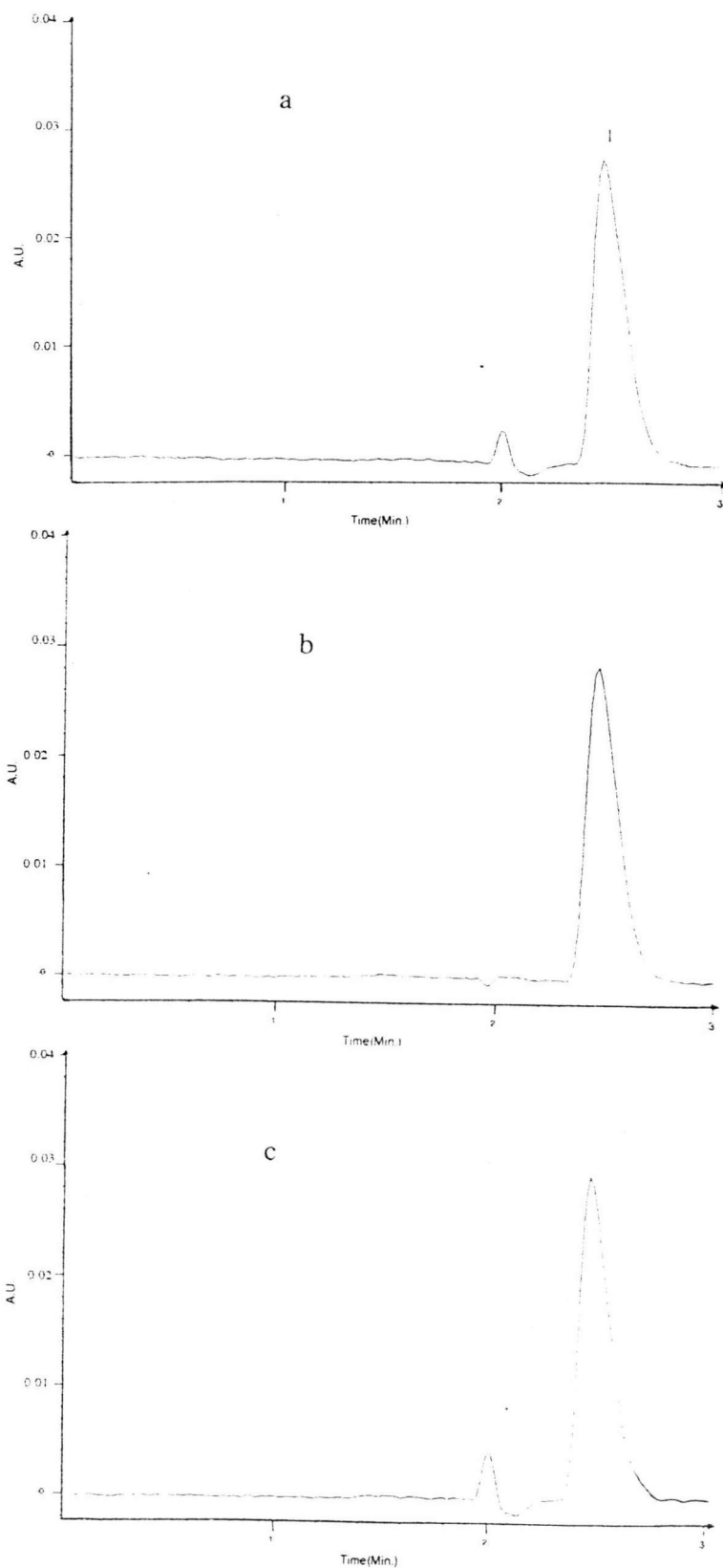


Figure D - 1 Chromatograms of standard phenol(1) at pH 4.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile(a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

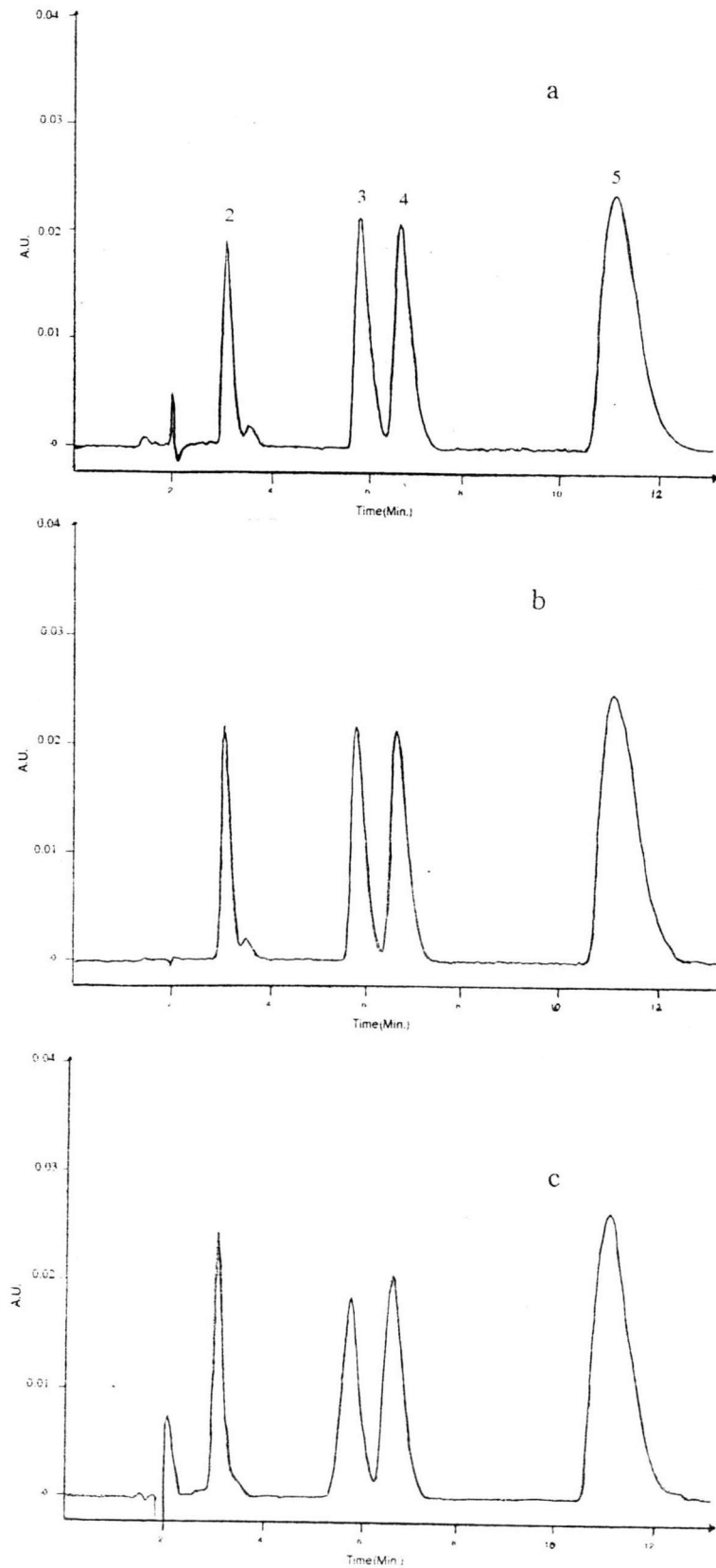


Figure D - 2 Chromatograms of standard L-ascorbic acid (2), benzoic acid (3), acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in D - 1

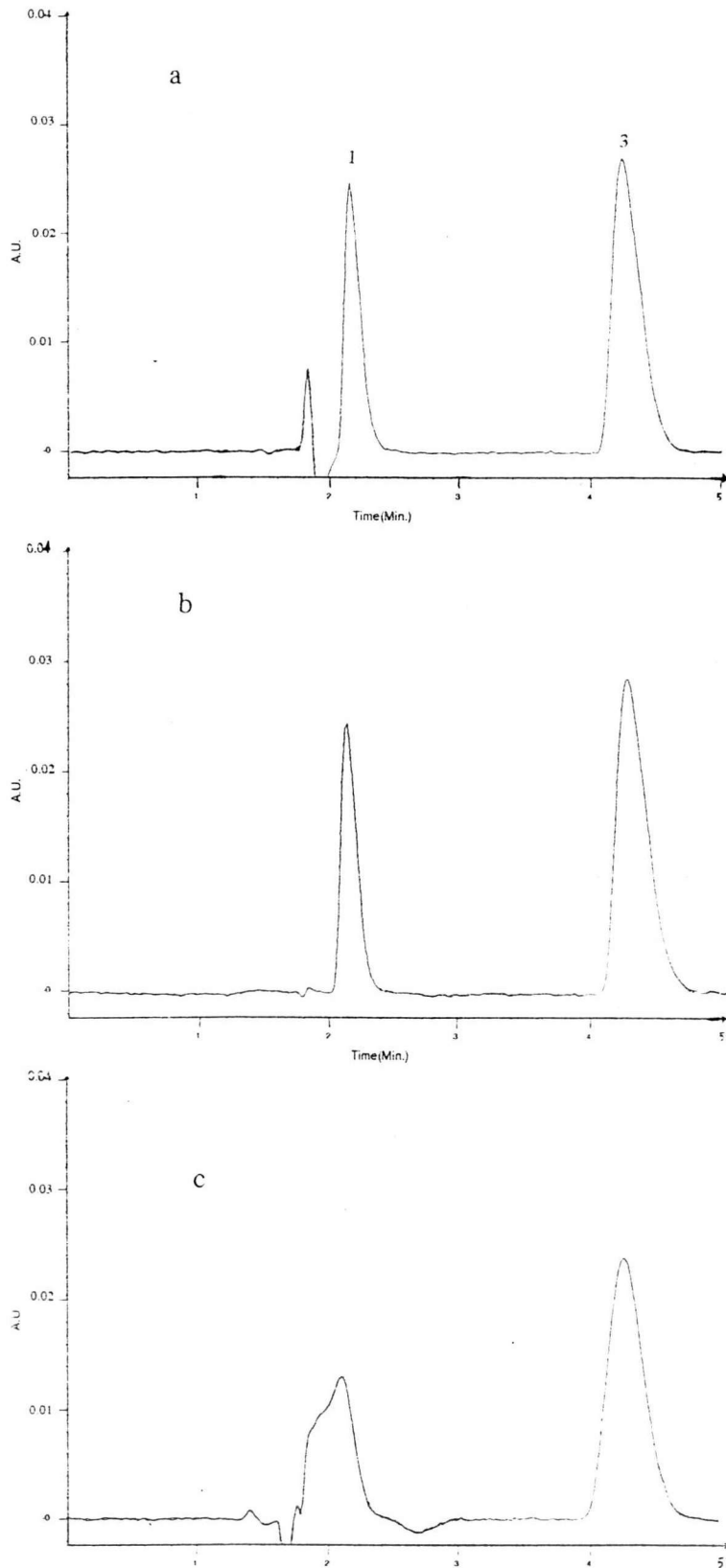


Figure D - 3 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 4.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

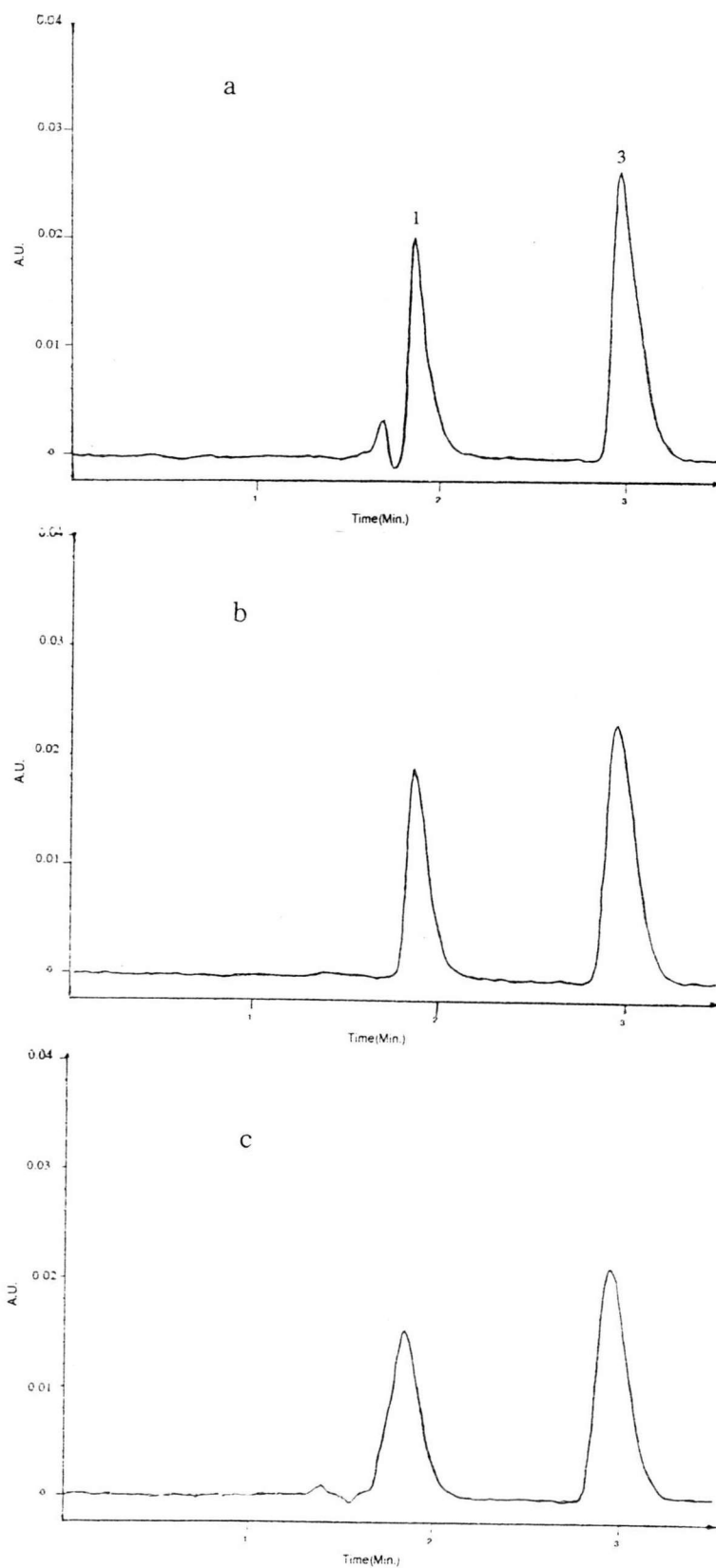


Figure D - 4 Chromatograms of standard mixtures of L-ascorbic acid (2), acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in D - 3

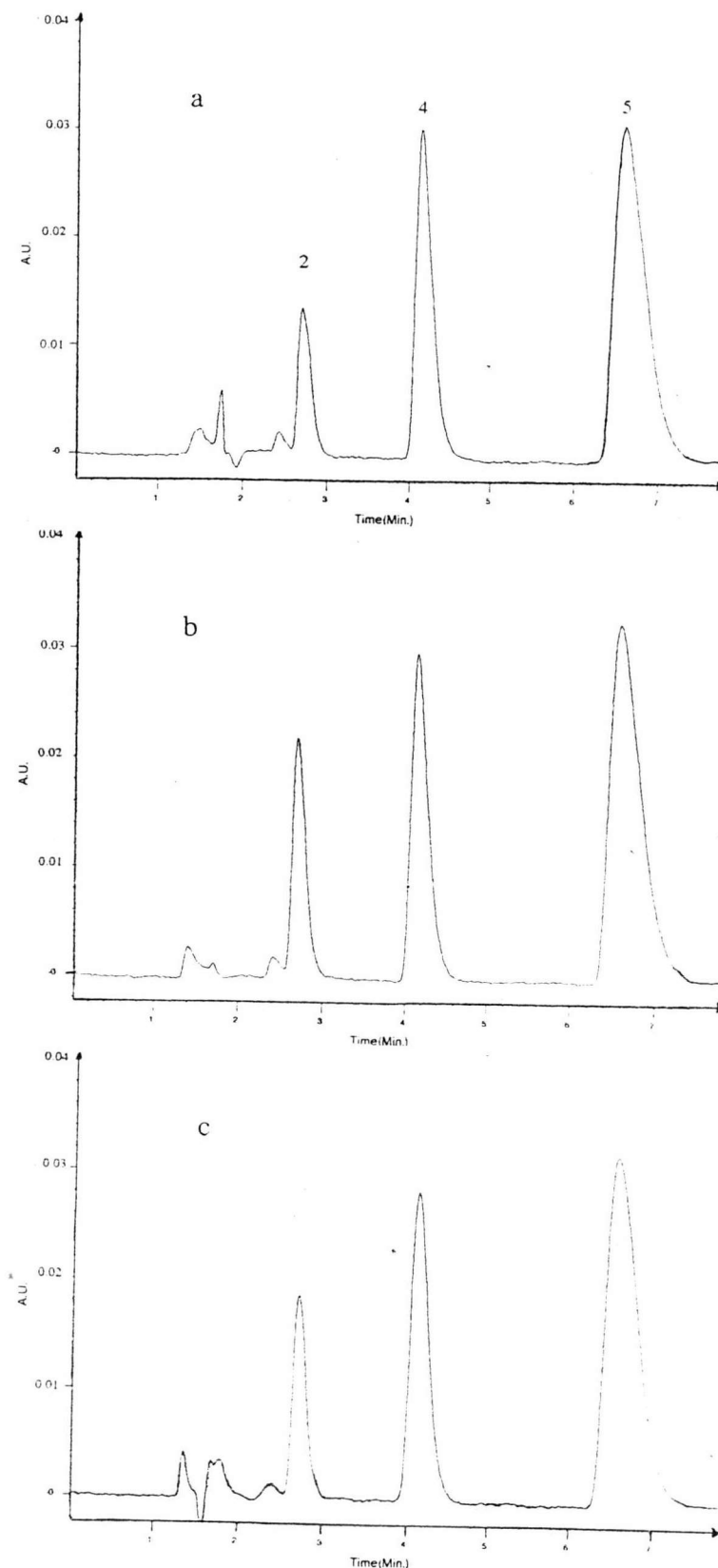


Figure D - 5 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 4.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

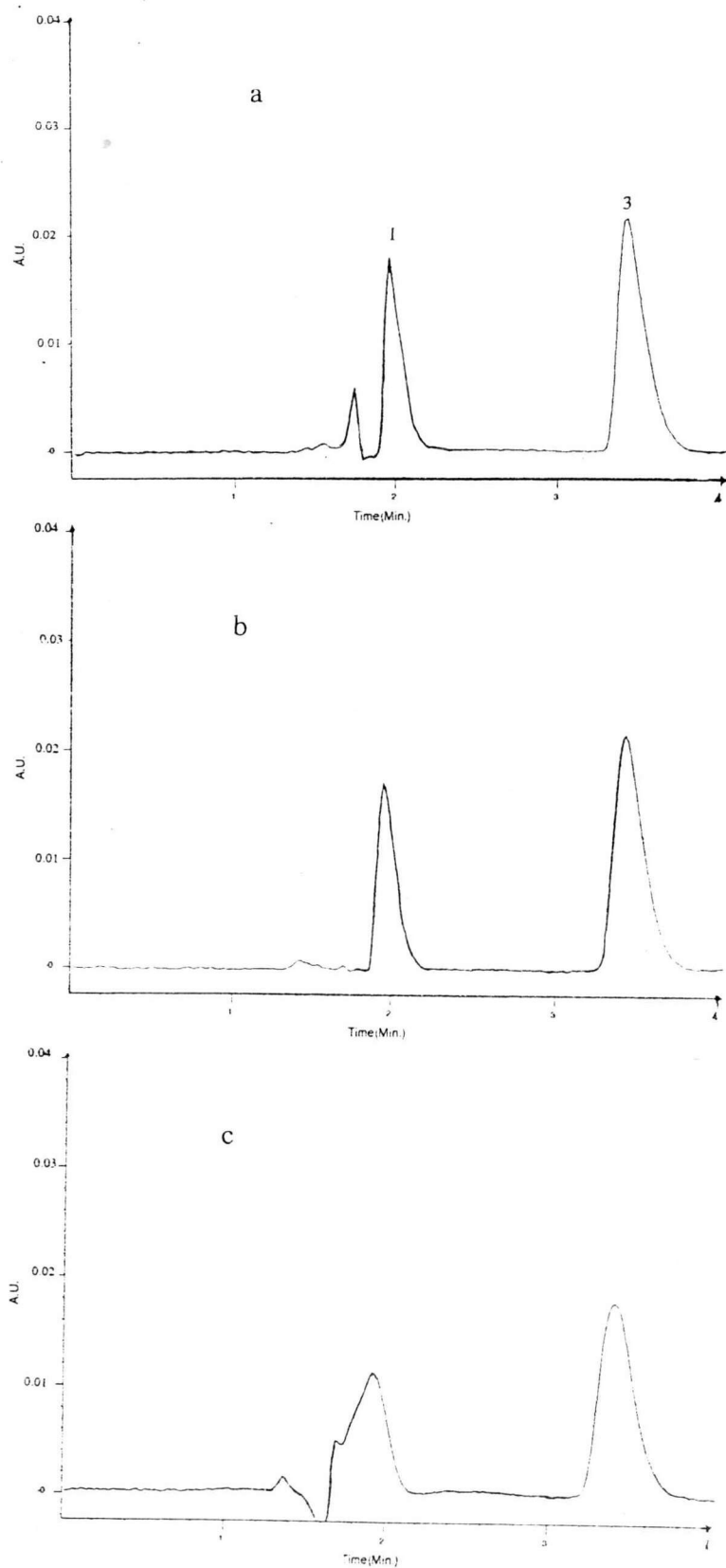


Figure D - 6 Chromatograms of standard mixtures of L-ascorbic acid (2), acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in D - 5

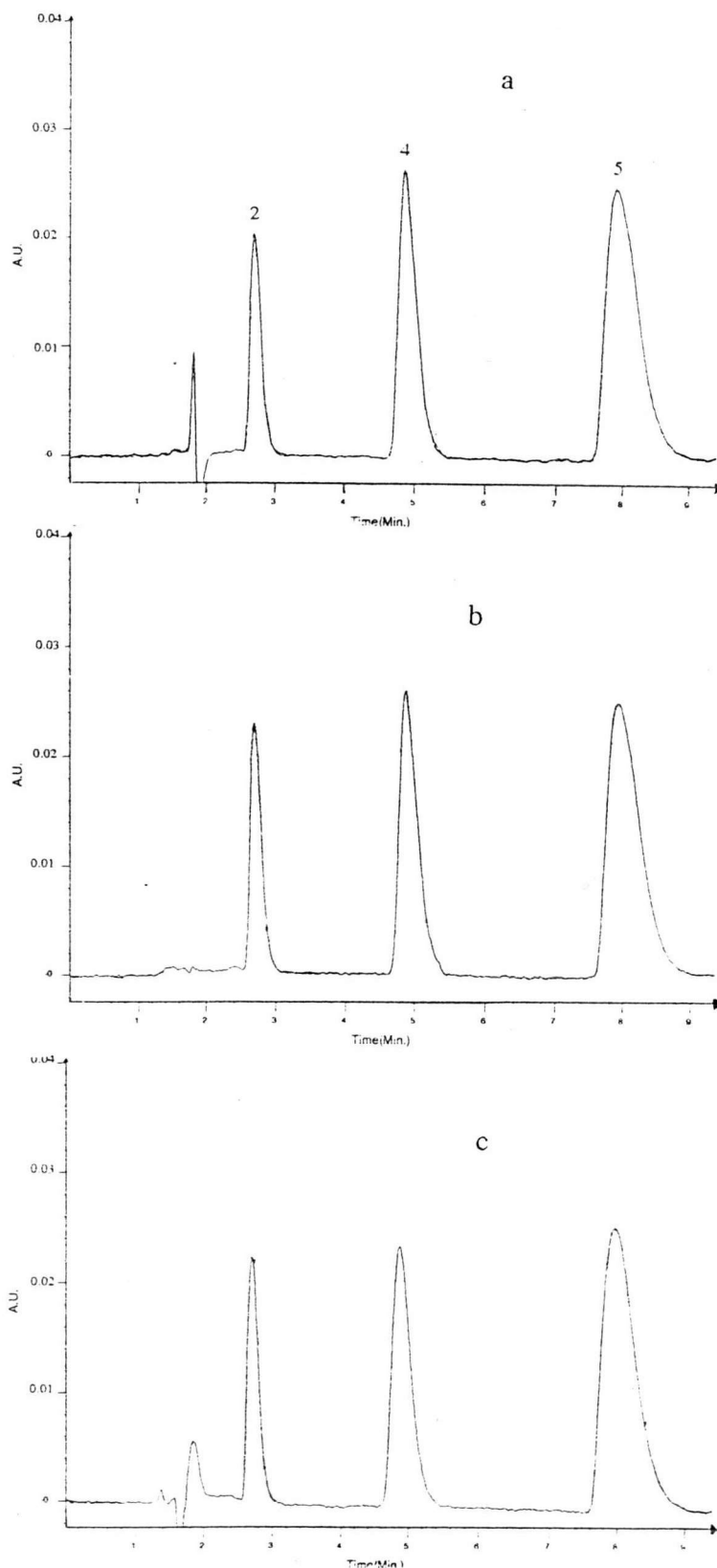


Figure D - 7 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 4.0 on phenylpropanolamine column, 5 μ m, 150 \times 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

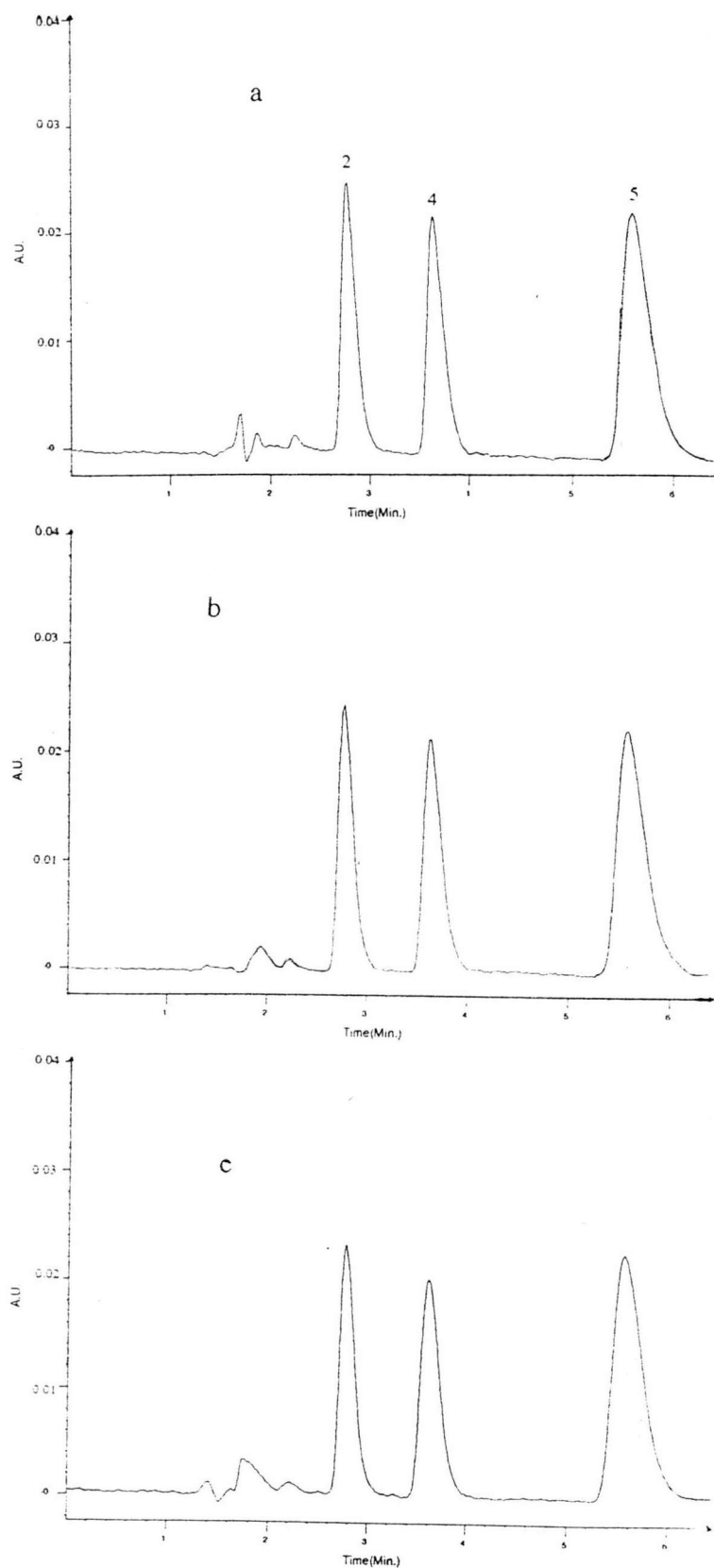


Figure D - 8 Chromatograms of standard mixtures of L-ascorbic acid (2), acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in D - 7

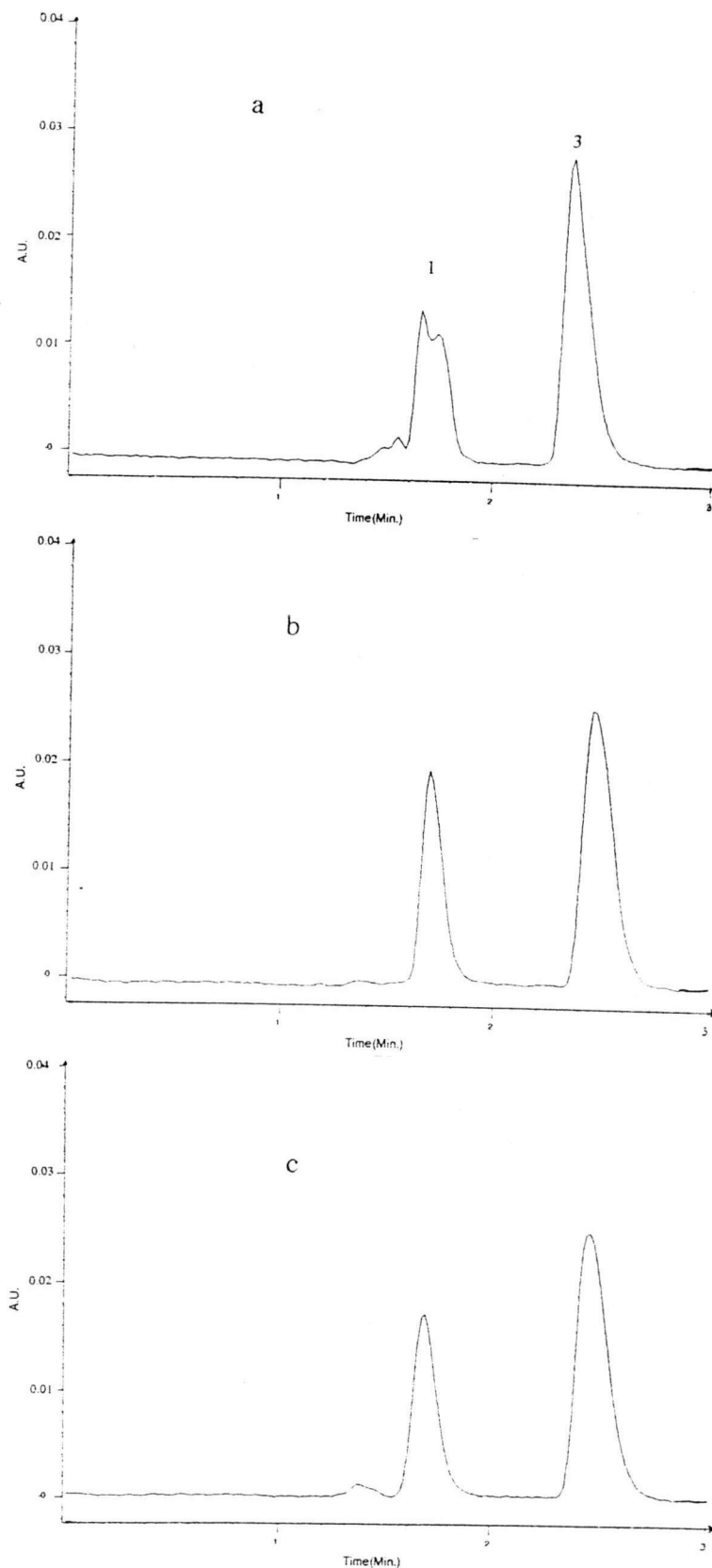


Figure D - 9 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 4.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

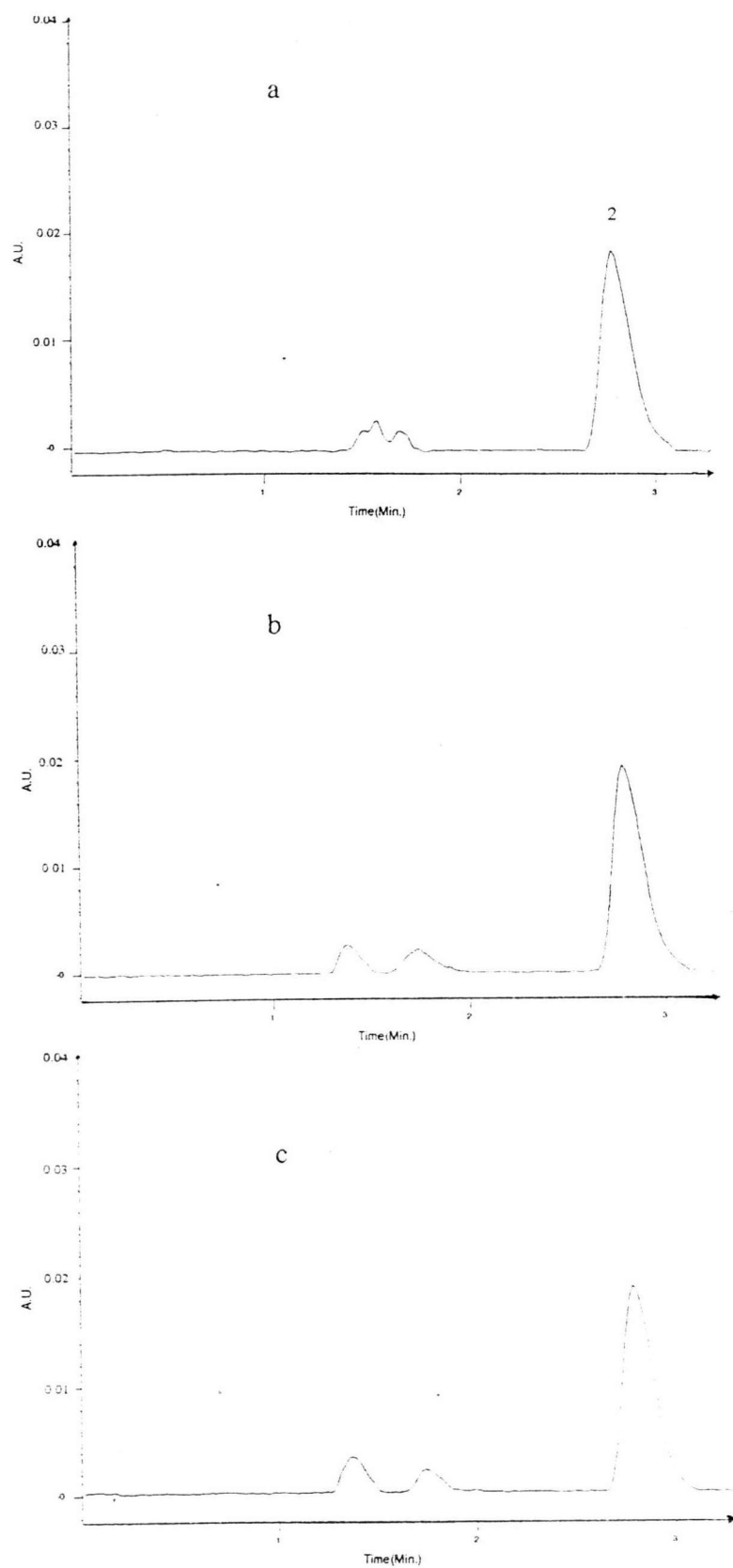


Figure D - 10 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in D - 9

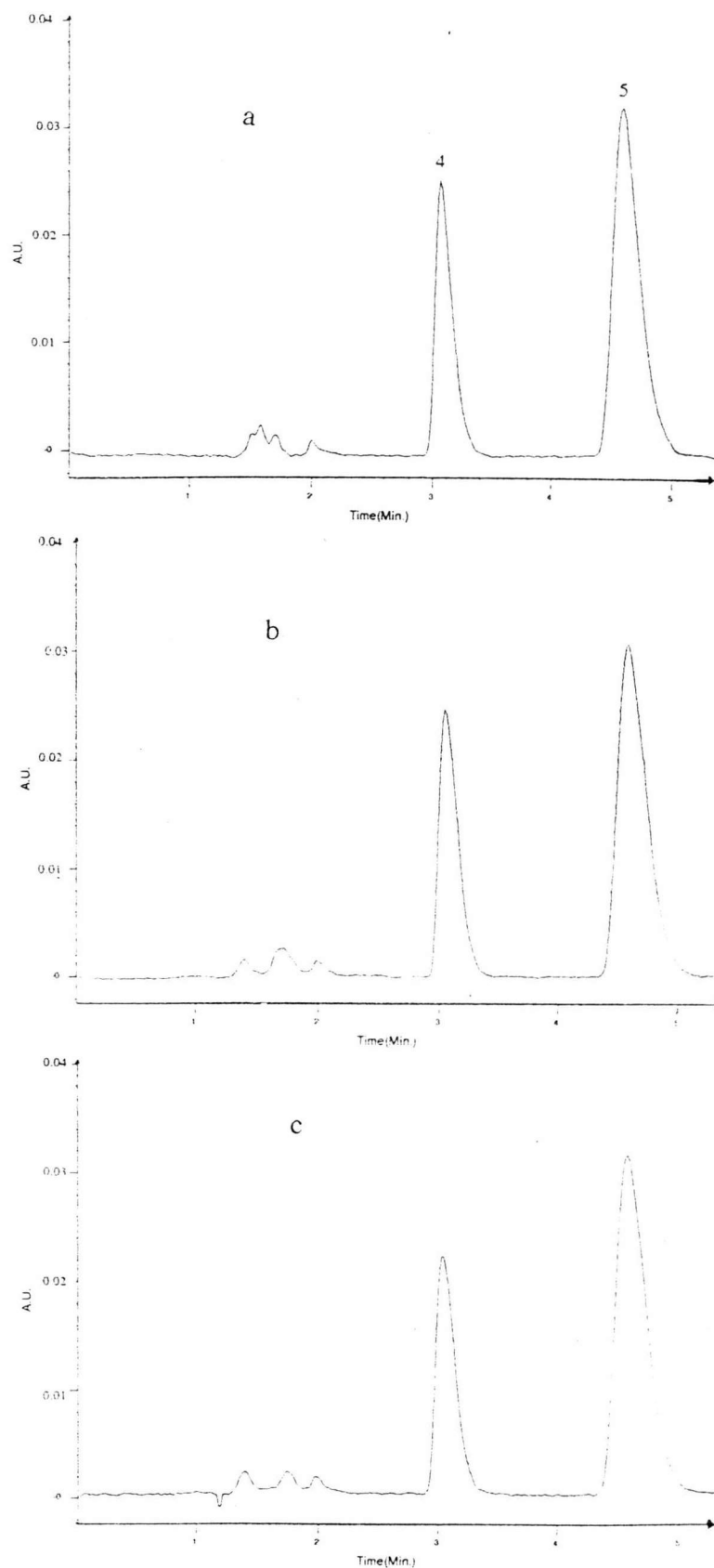


Figure D - 11 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in D - 9

APPENDIX E

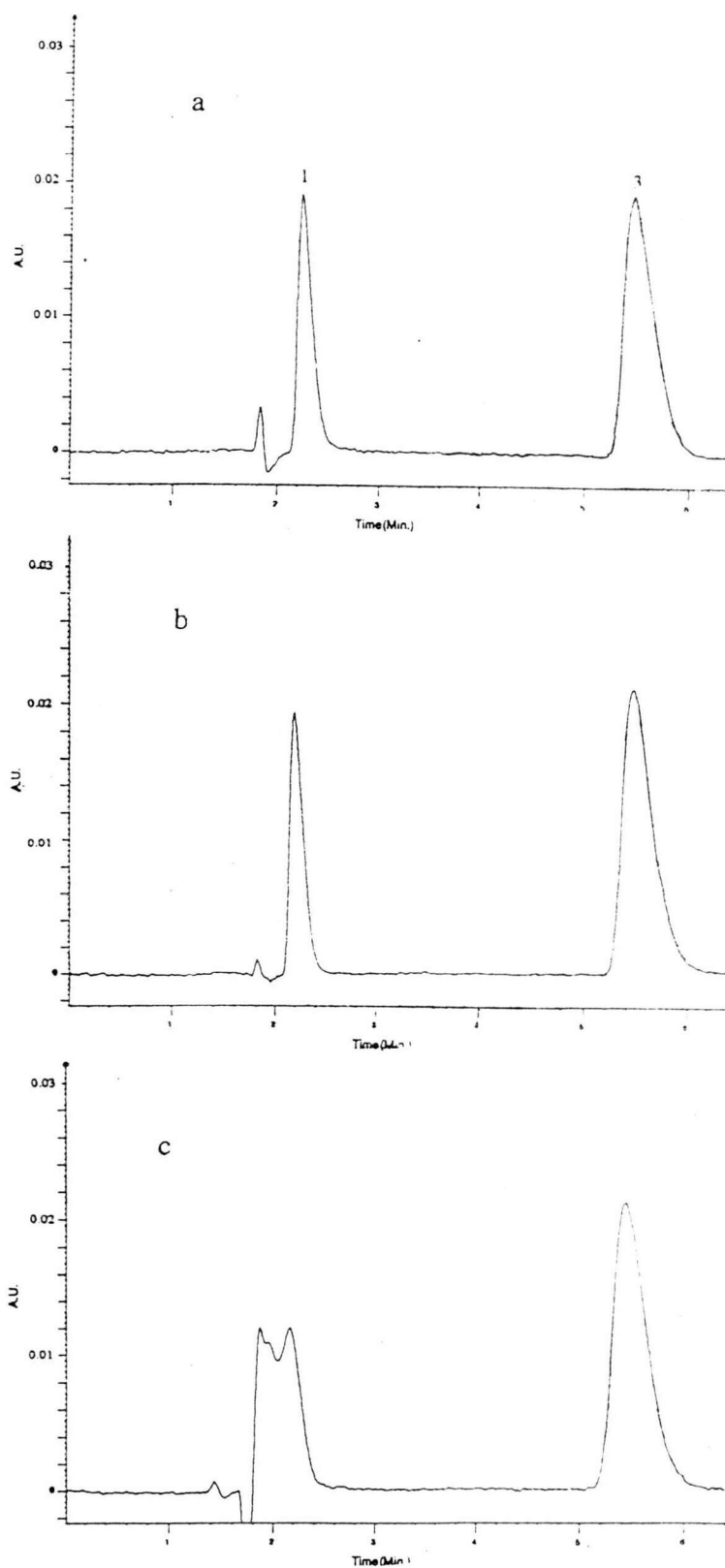


Figure E - 1 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 4.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

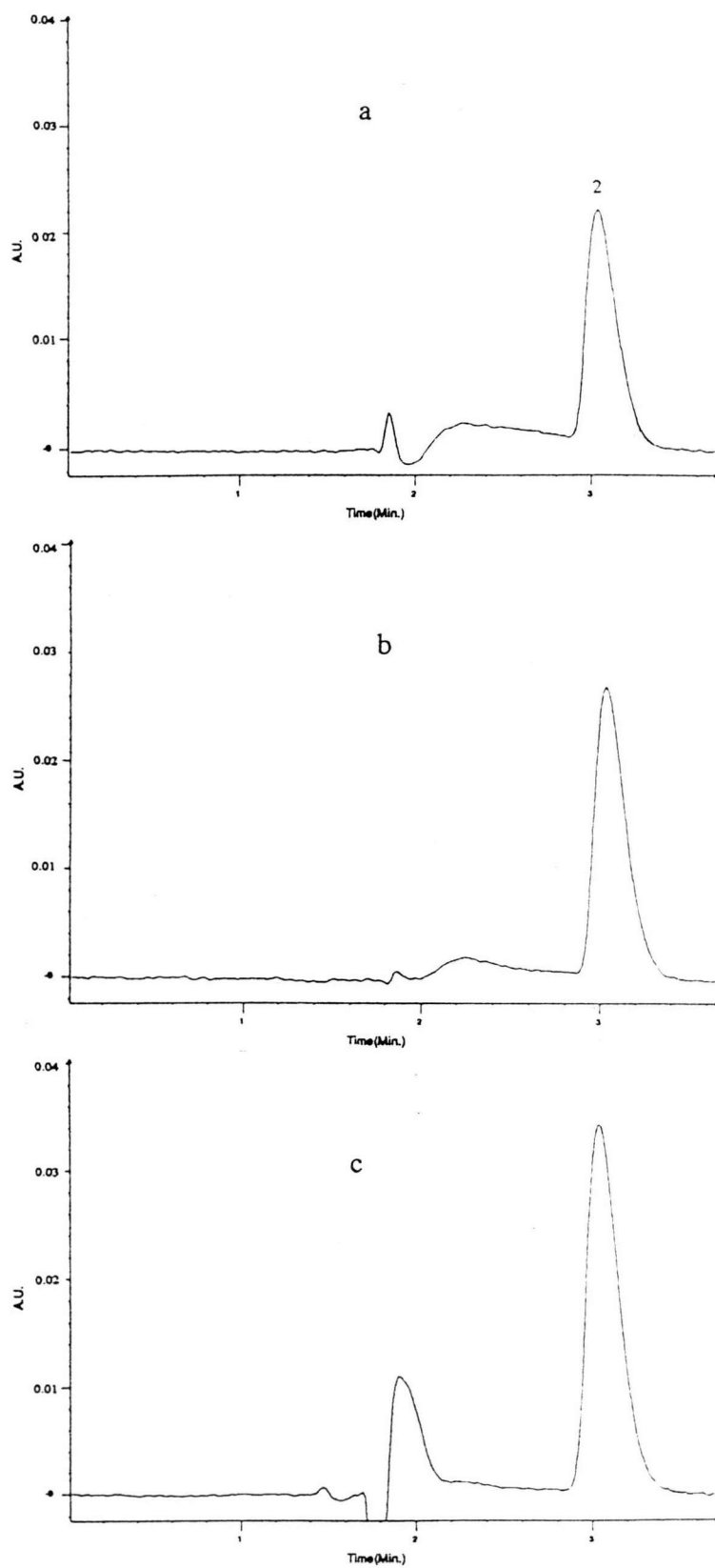


Figure E - 2 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in E - 1

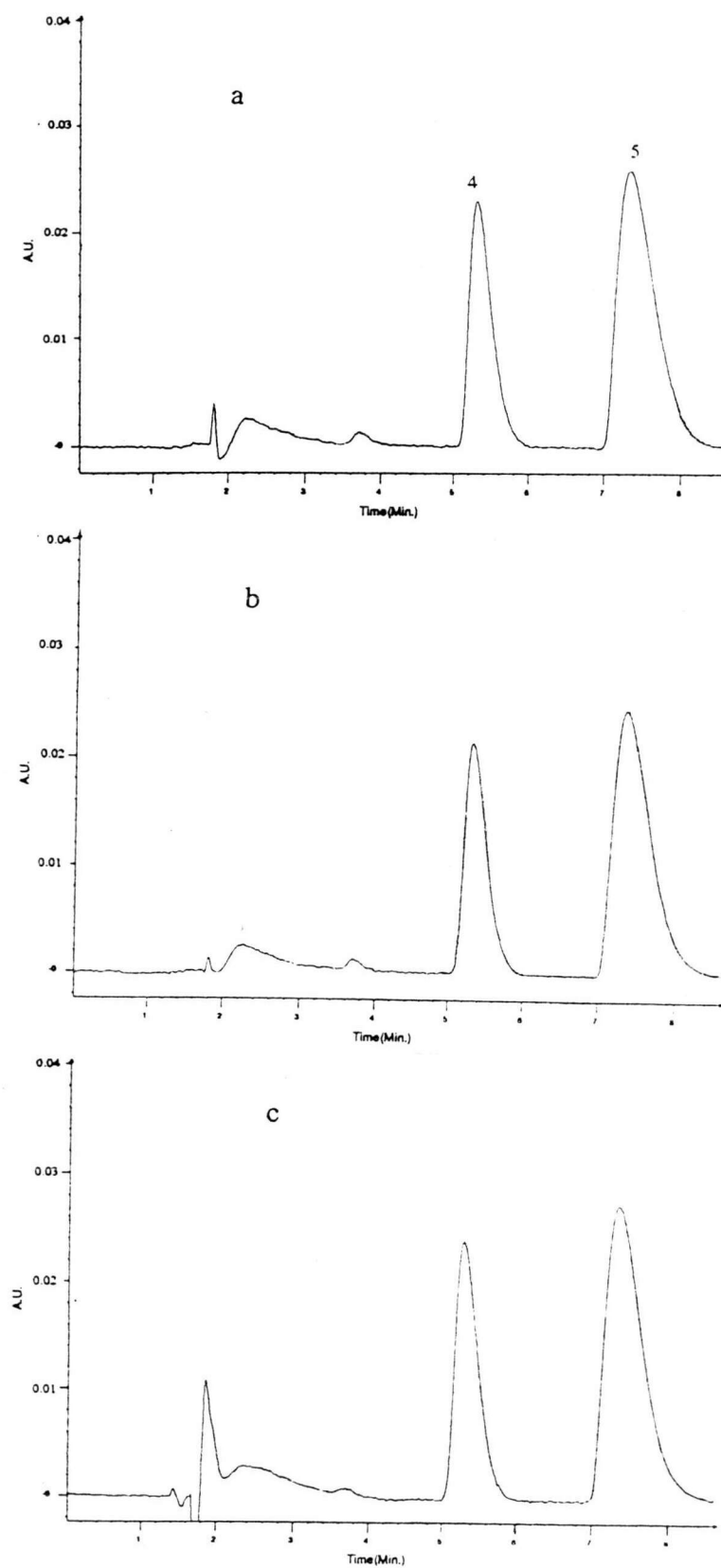


Figure E - 3 Chromatograms of standard mixtures of acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in E - 1

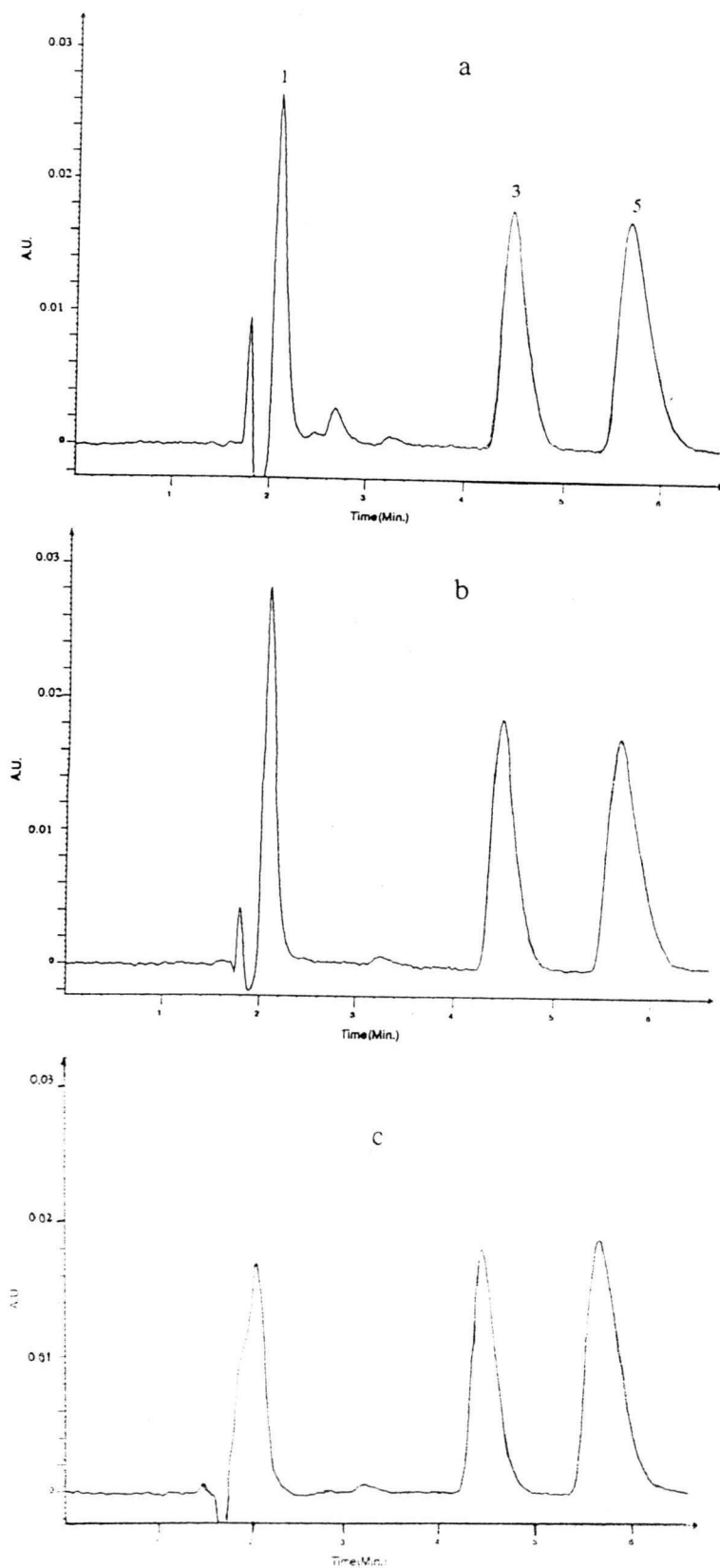


Figure E - 4 Chromatograms of standard mixtures of phenol (1) , benzoic acid (3) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm. I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

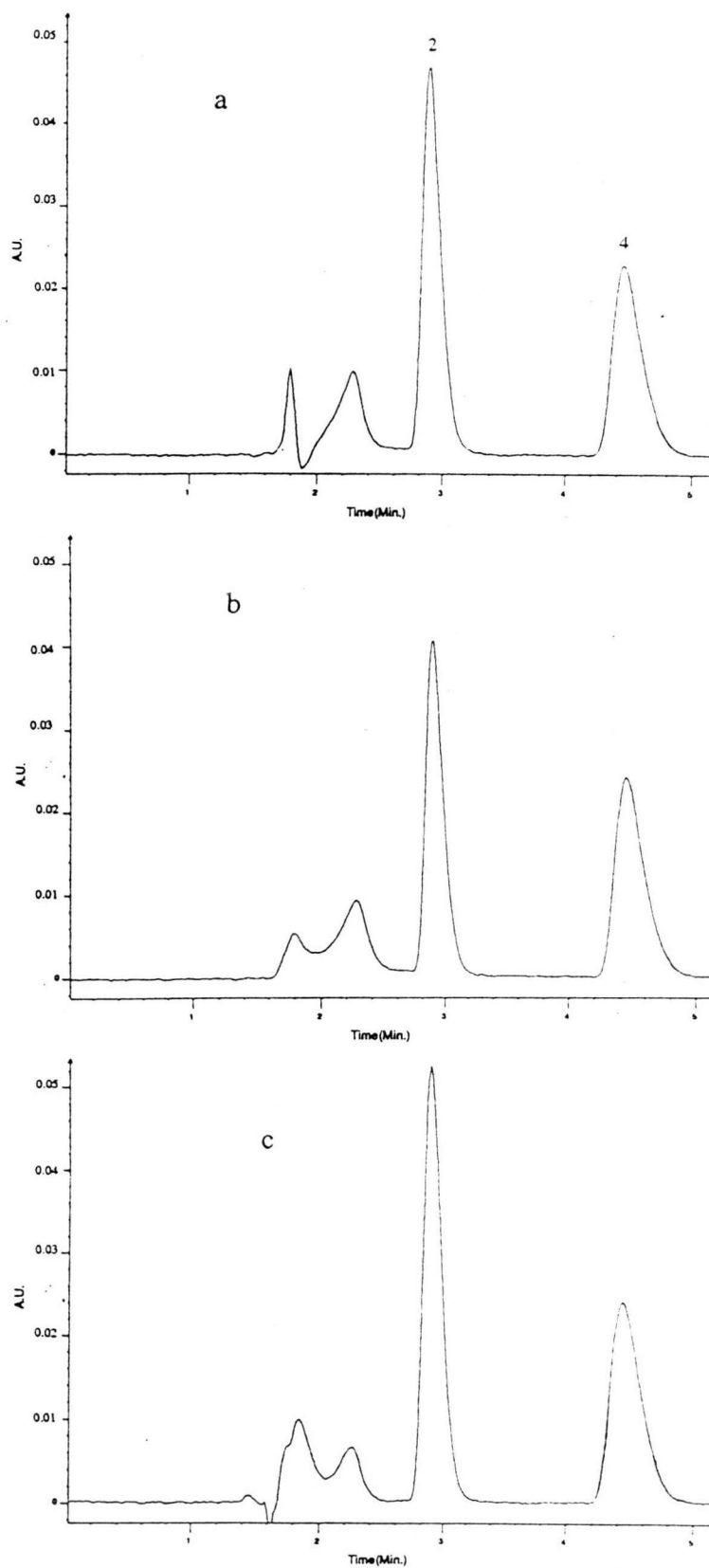


Figure E - 5 Chromatograms of standard mixtures of L-ascorbic acid (2) and acetylsalicylic acid (4). Chromatographic conditions as given in E - 4

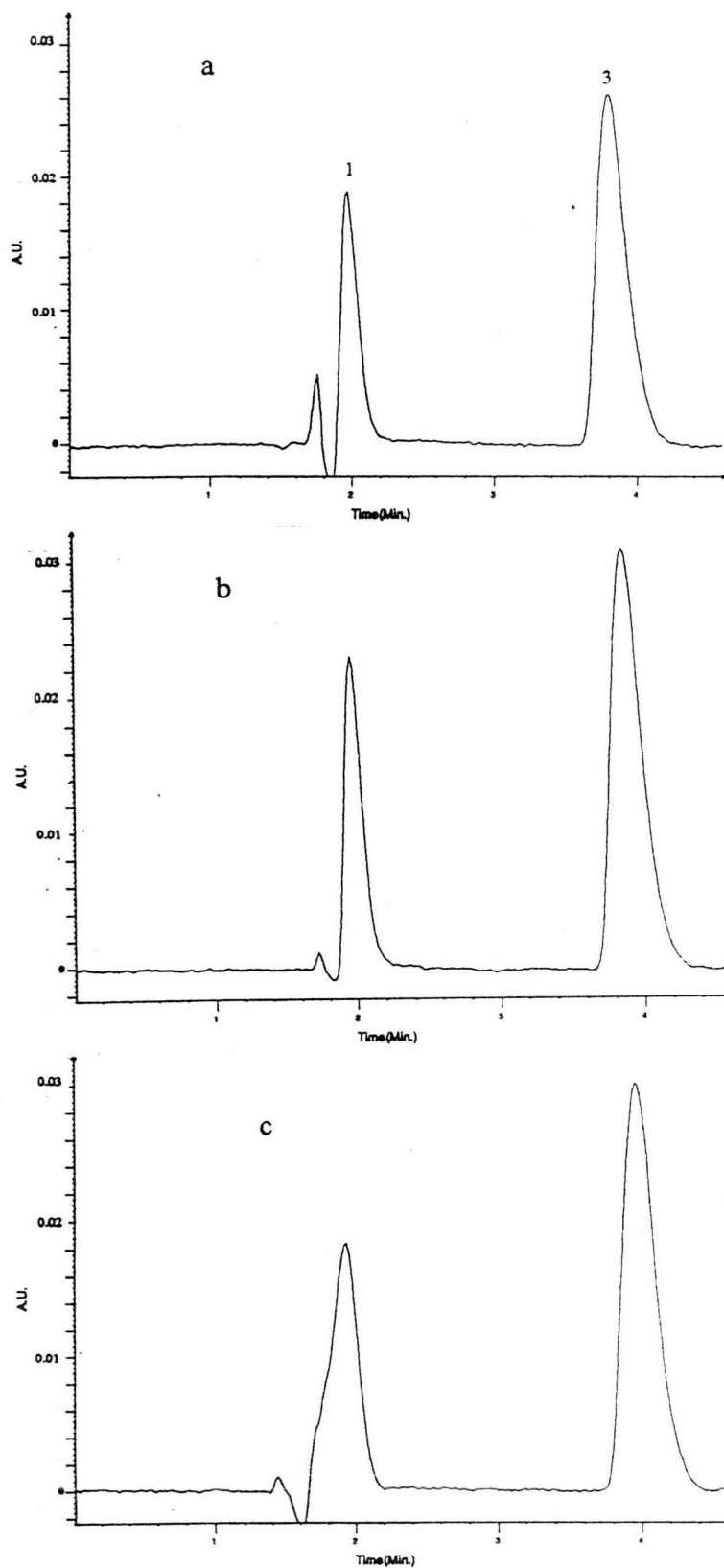


Figure E - 6 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 4.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

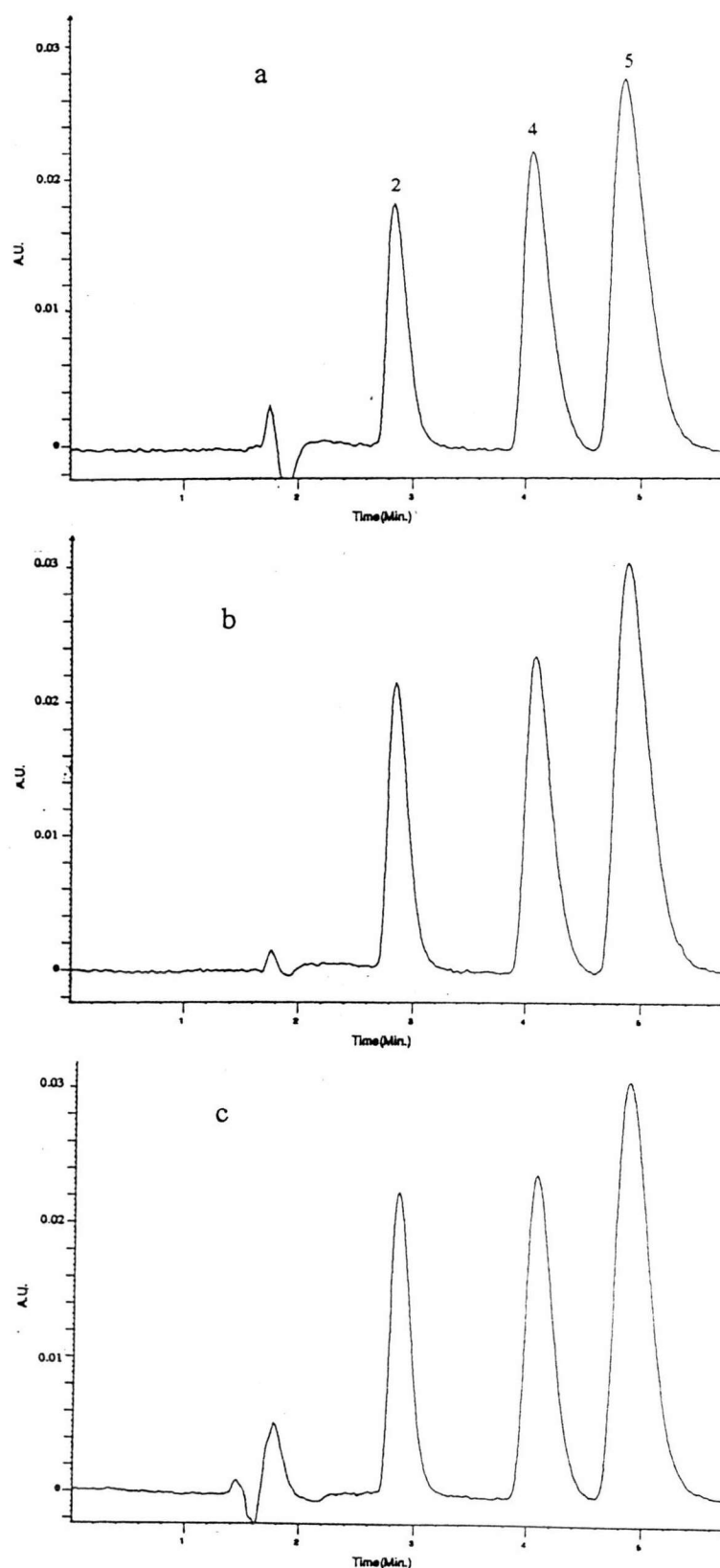


Figure E - 7 Chromatograms of standard mixtures of L-ascorbic acid (1), acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in E - 5

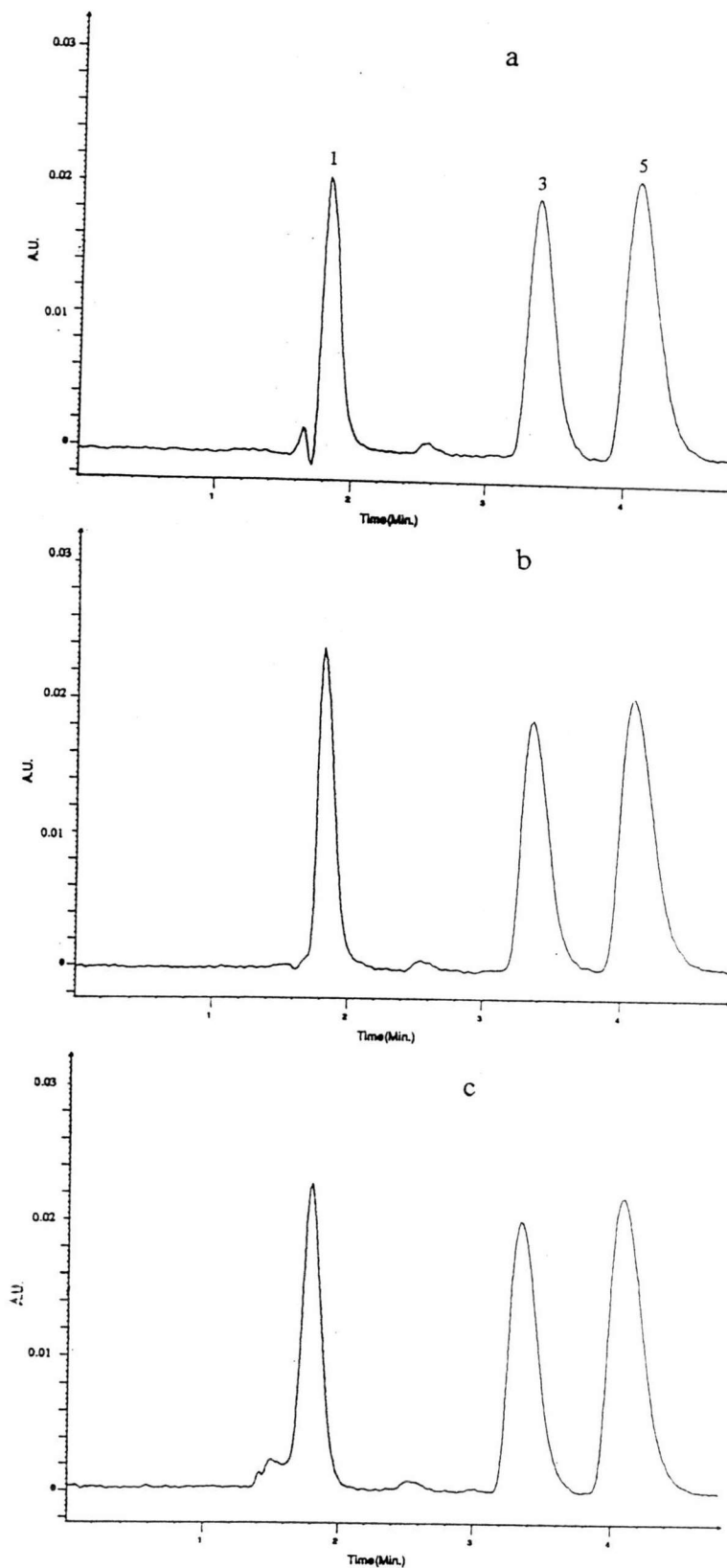


Figure E - 8 Chromatograms of standard mixtures of phenol (1), benzoic acid (2) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm.I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

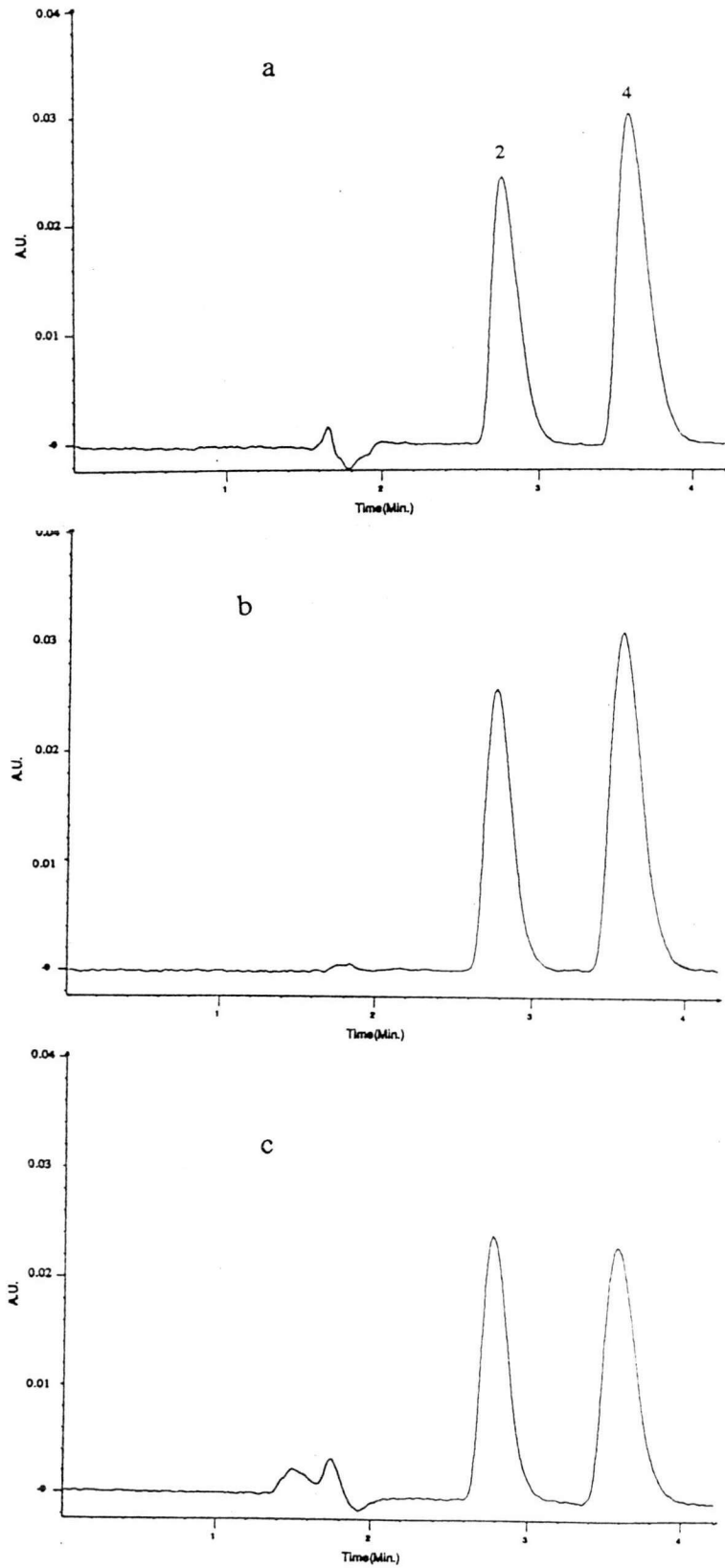


Figure E - 9 Chromatograms of standard mixtures of L-ascorbic acid (2) and acetylsalicylic acid (4). Chromatographic conditions as given in E - 8

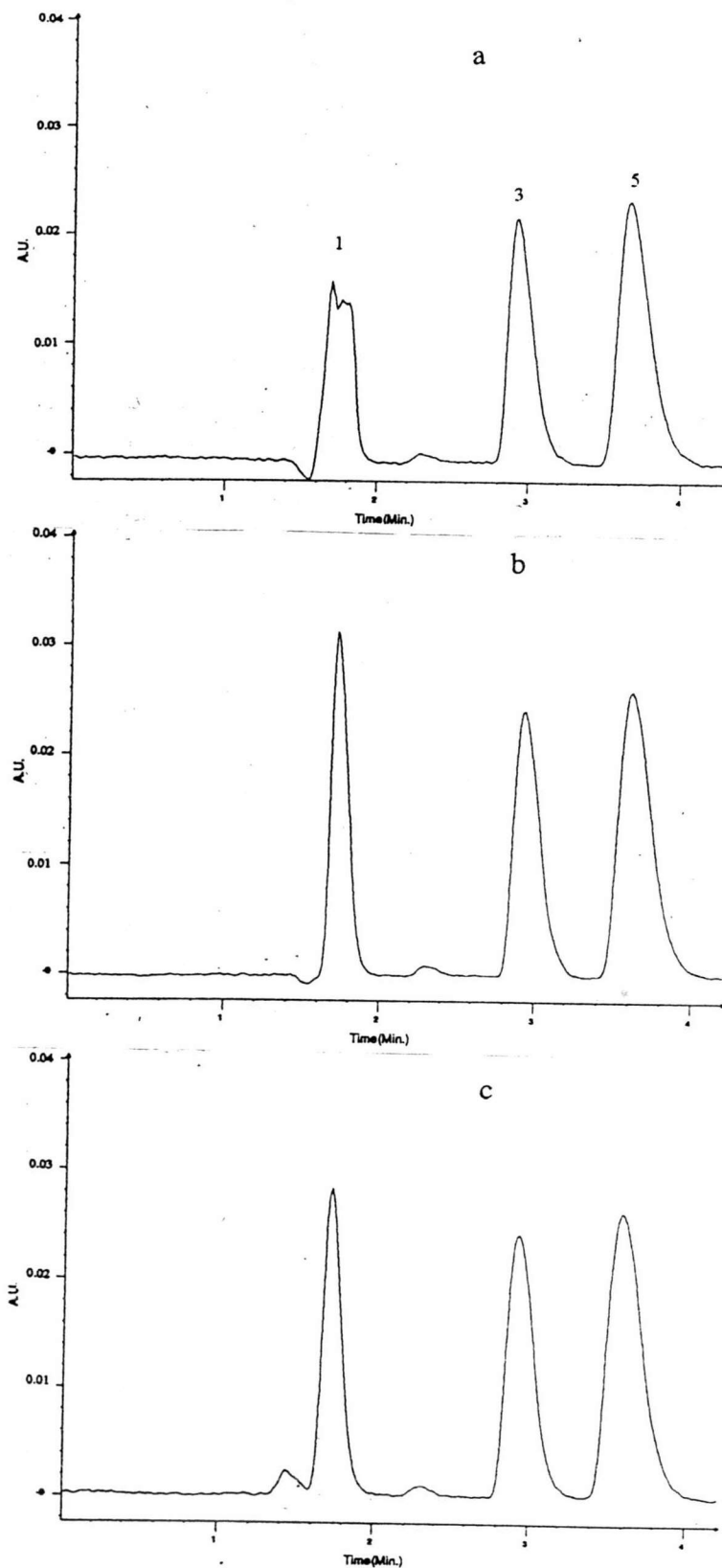


Figure E - 10 Chromatograms of standard mixtures of phenol (1), benzoic acid (3) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm.I.D. dissolved in 5% (v/v) acetonitrile(a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1ml/min. ; UV 254 nm.

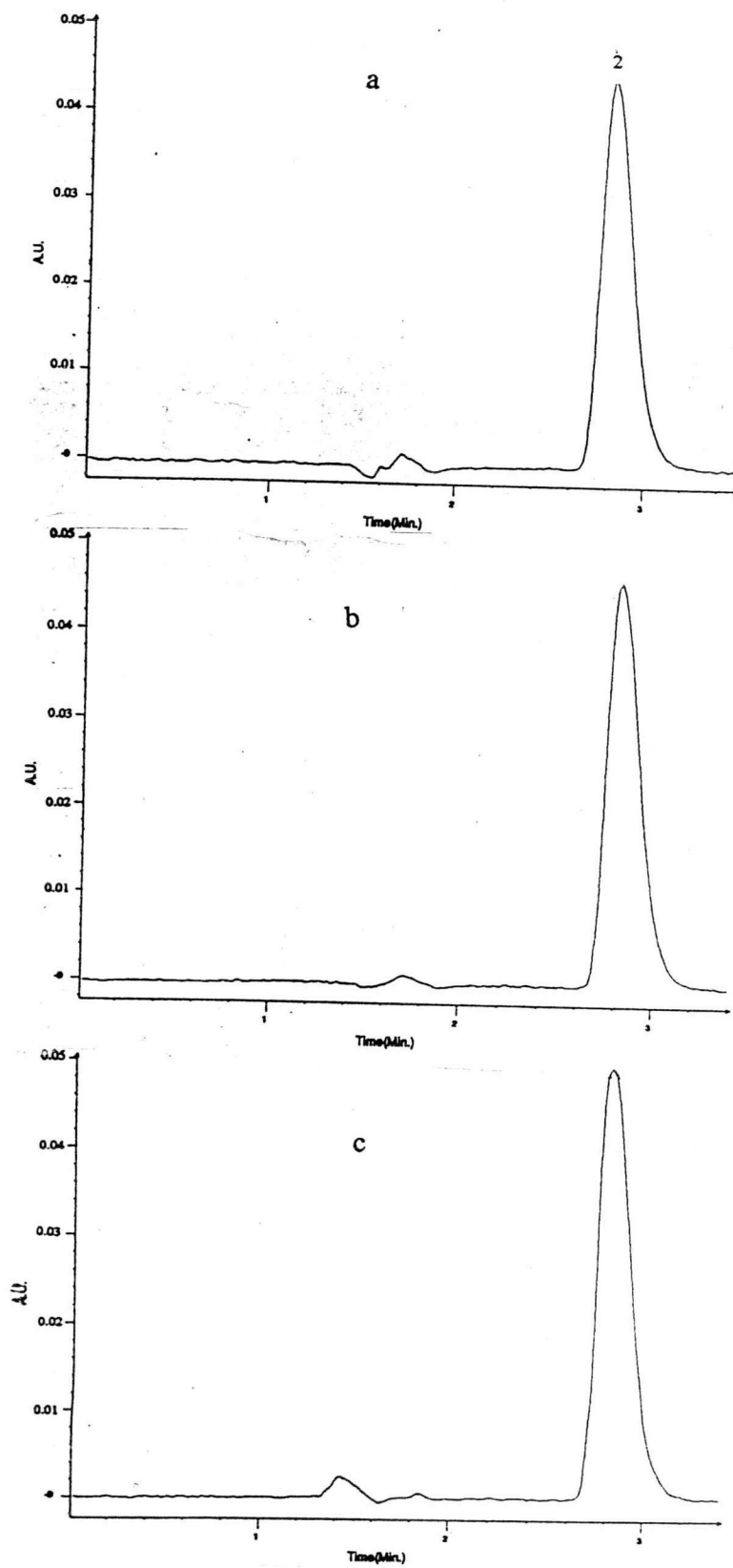


Figure E - 11 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in E - 10

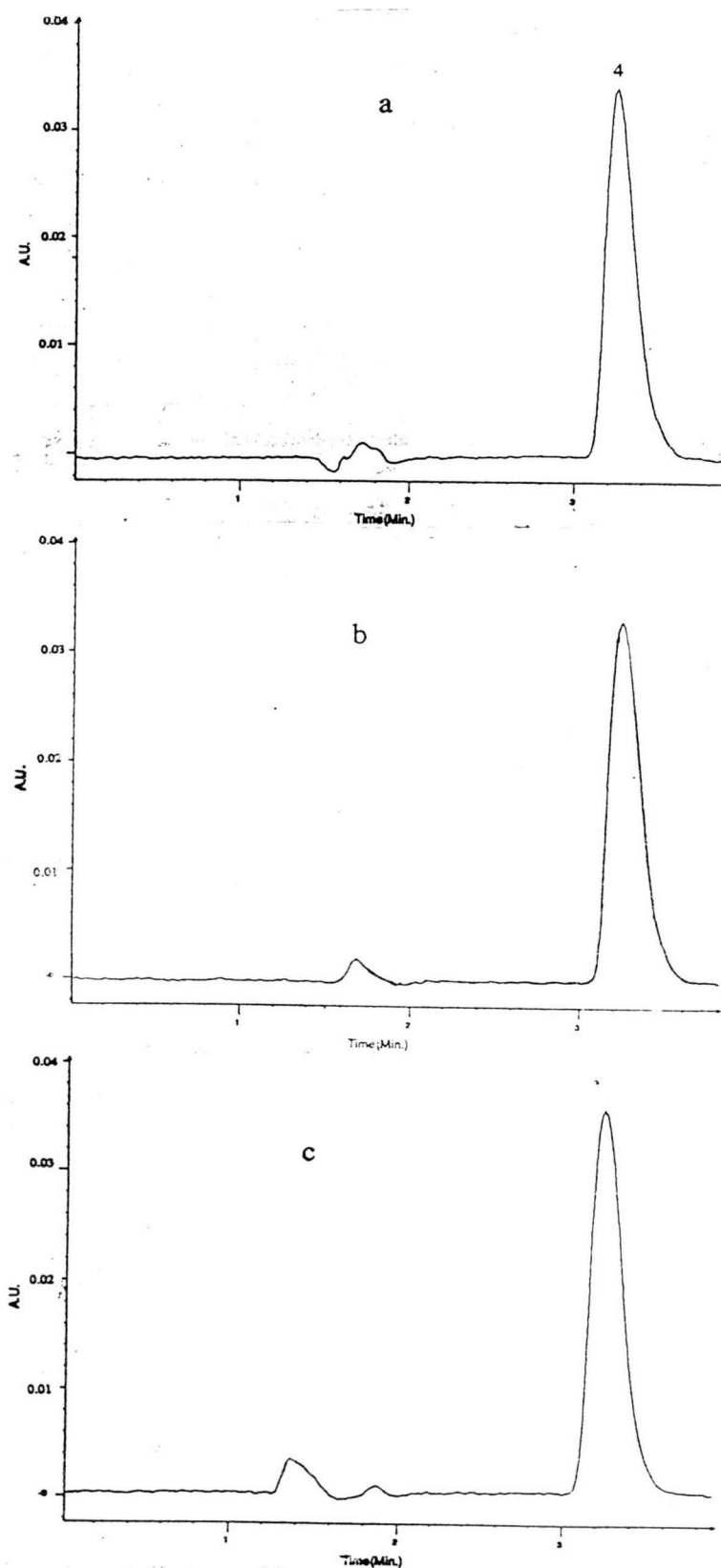


Figure E - 12 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in E - 10

APPENDIX F

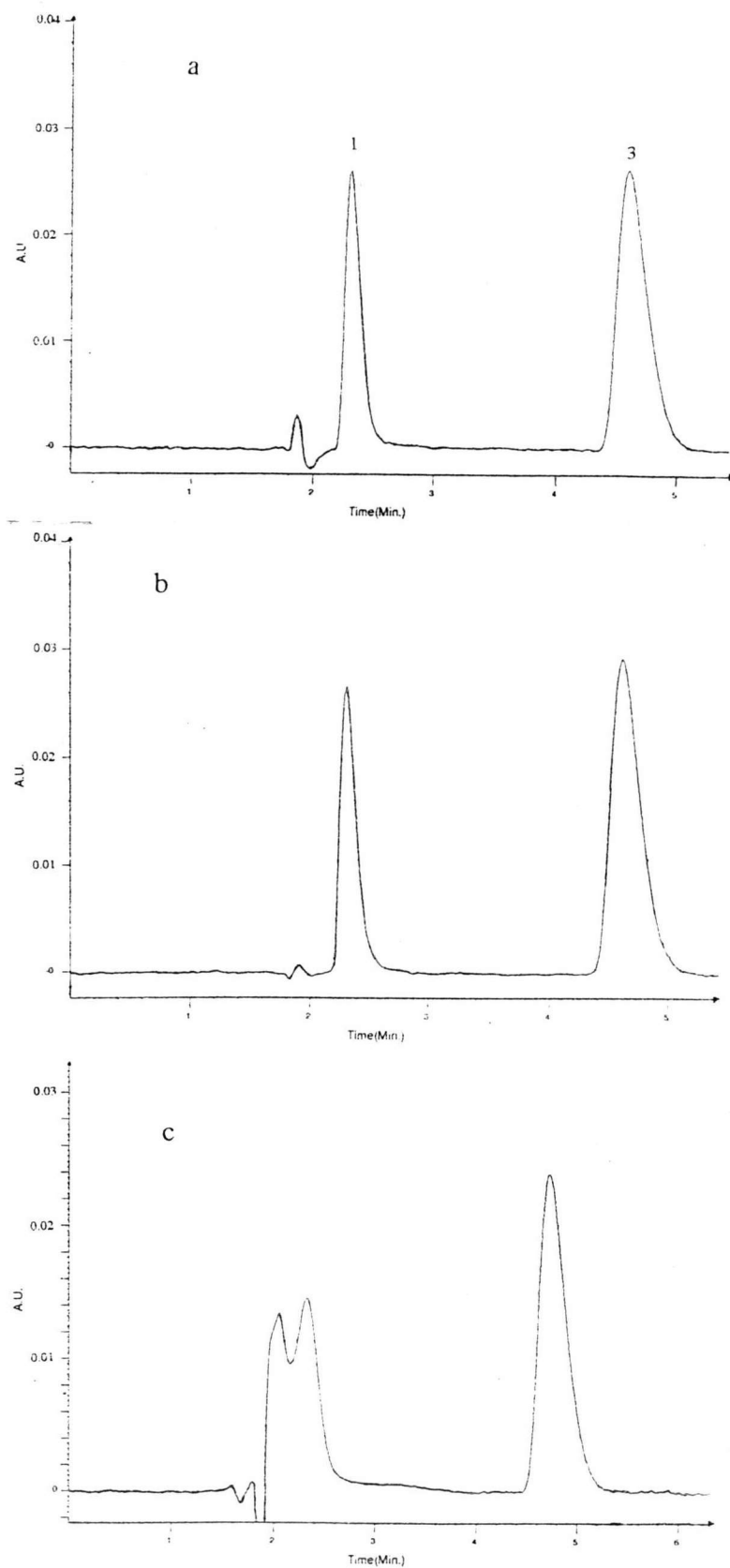


Figure F - 1 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 5.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

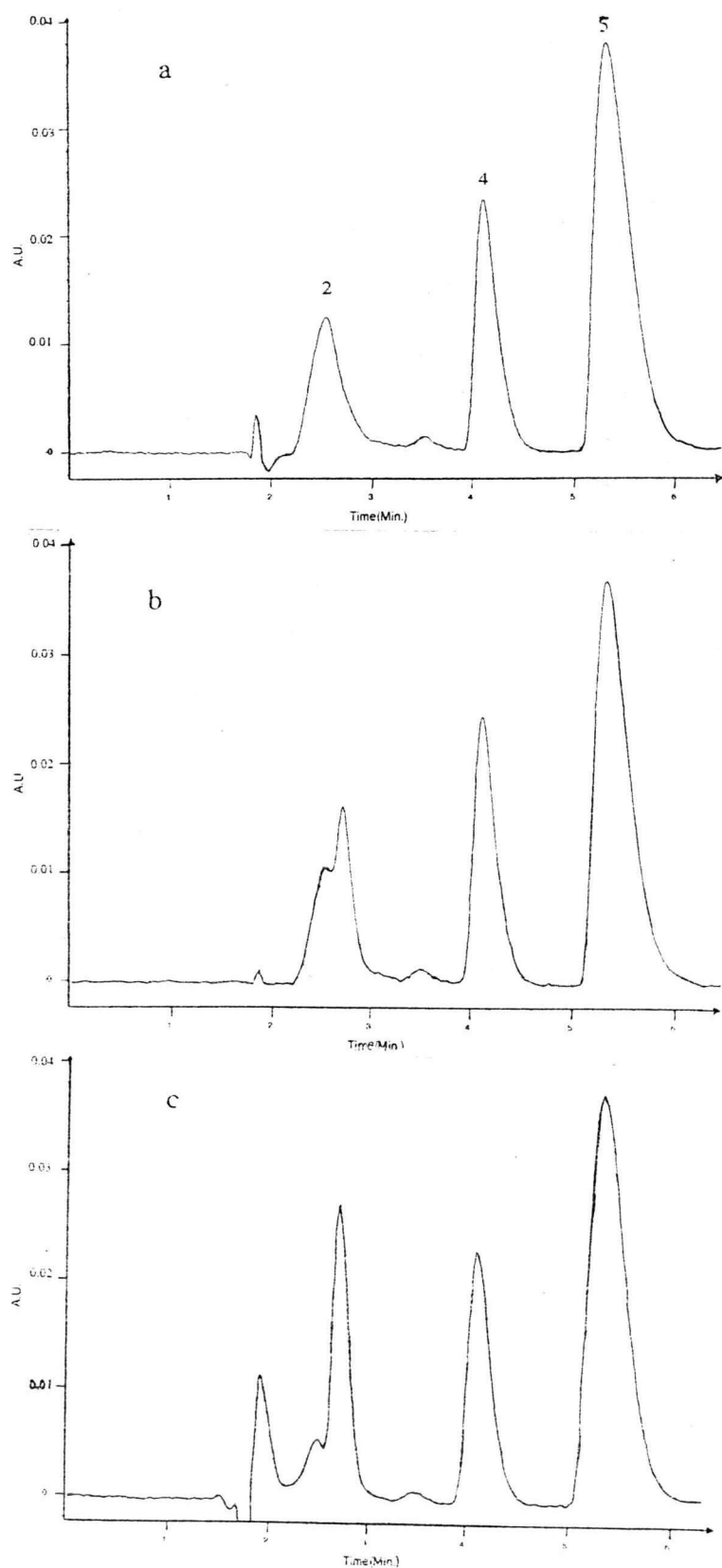


Figure F - 2 Chromatograms of standard mixtures of L-ascorbic acid (2) acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in F - 1

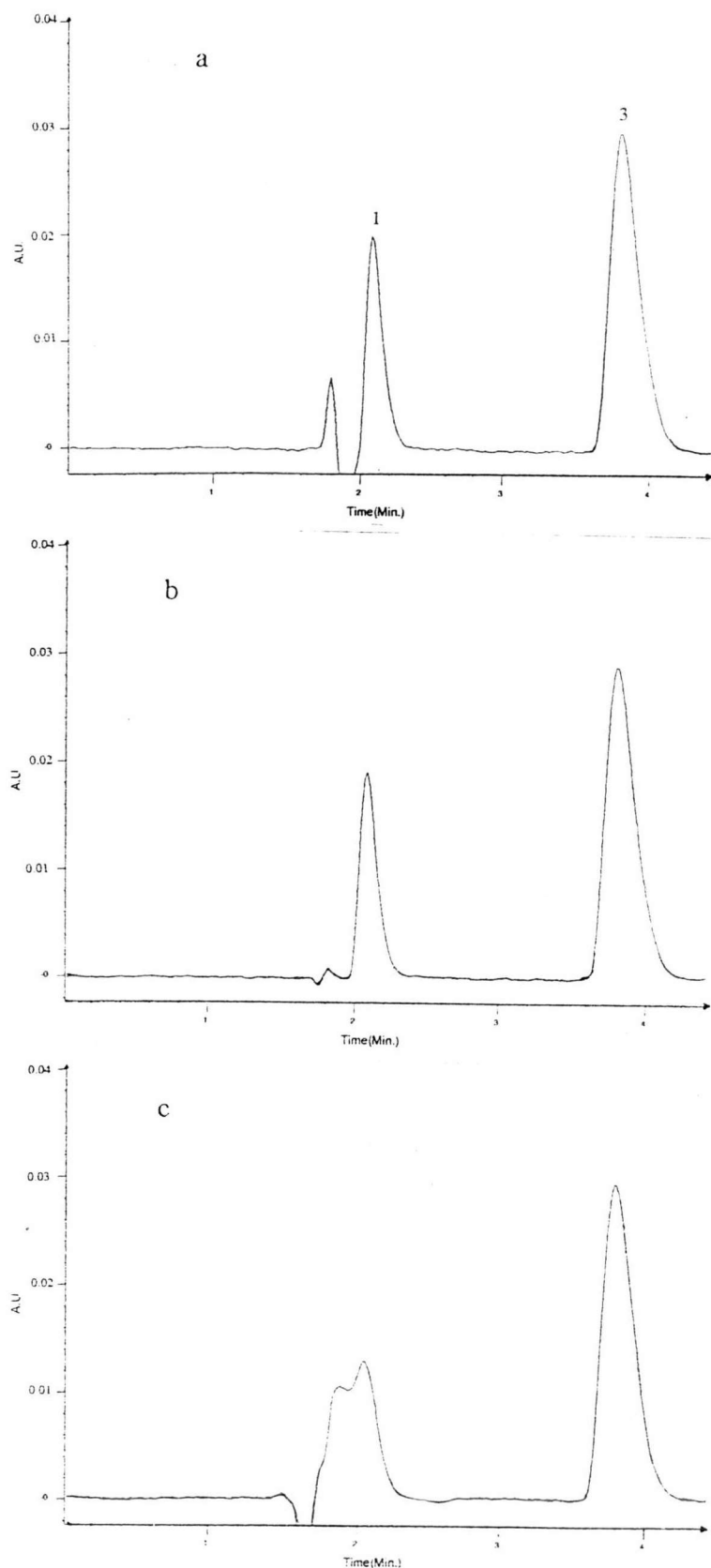


Figure F - 3 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 5.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm.I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

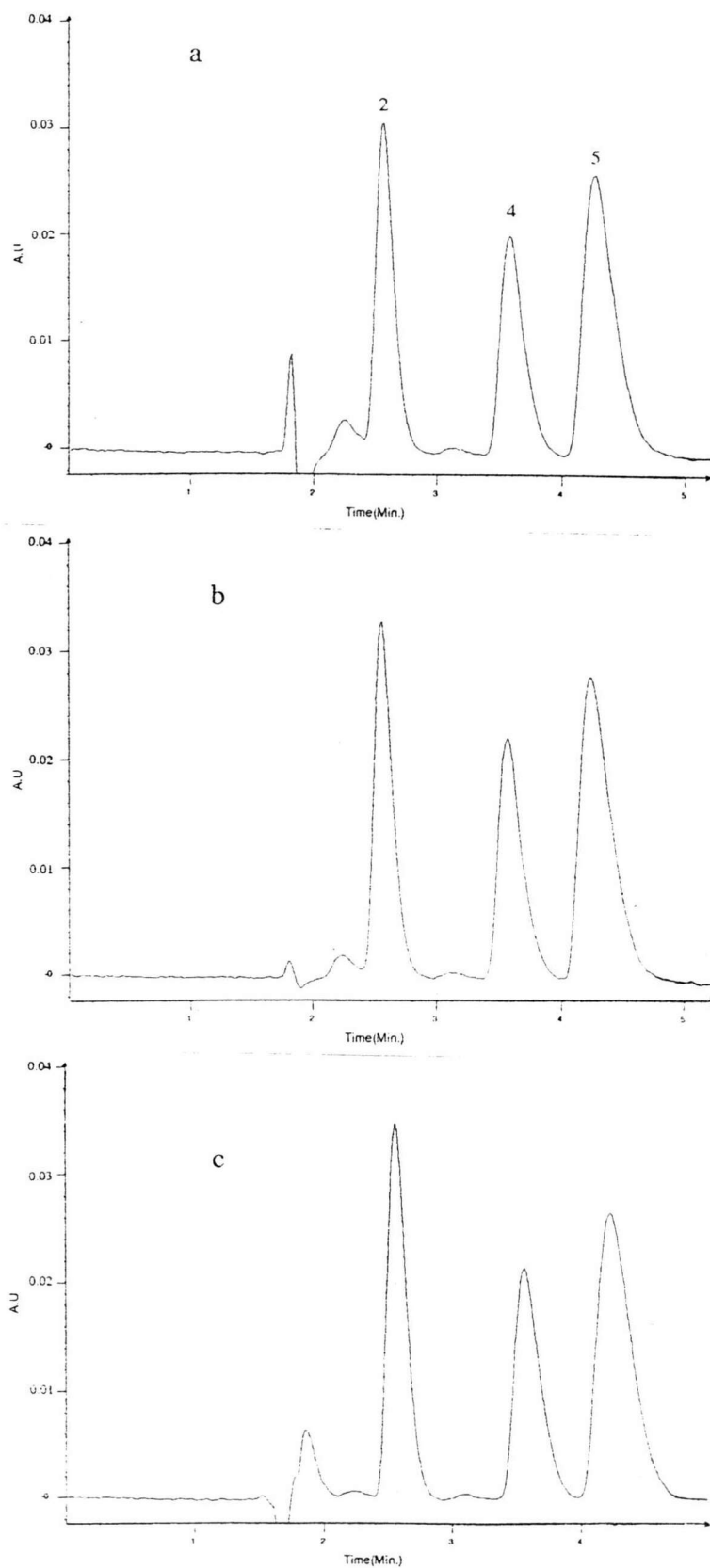


Figure F - 4 Chromatograms of standard mixtures of L-ascorbic acid (2), acetylsalicylic acid (4) and salicylic acid (5). Chromatographic conditions as given in F - 3

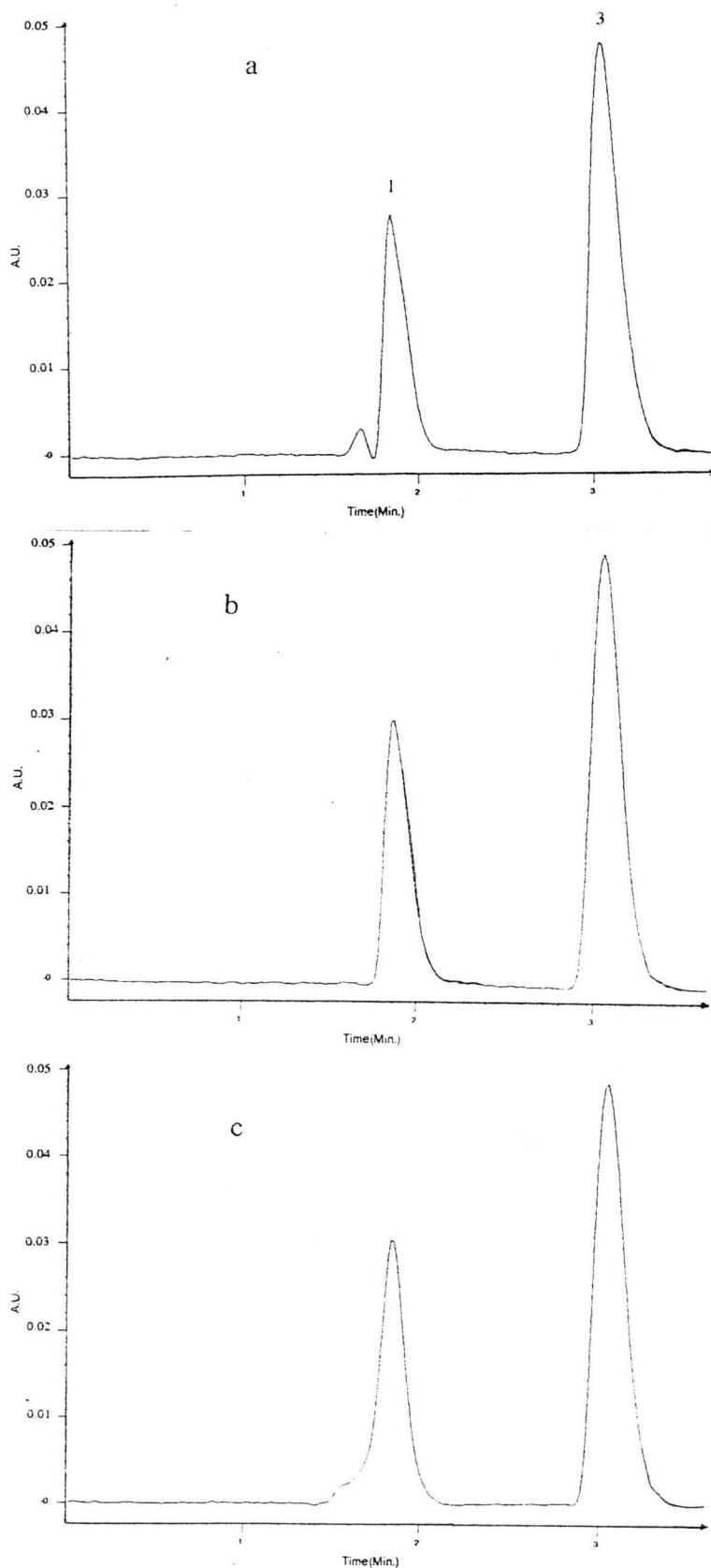


Figure F - 5 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 5.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

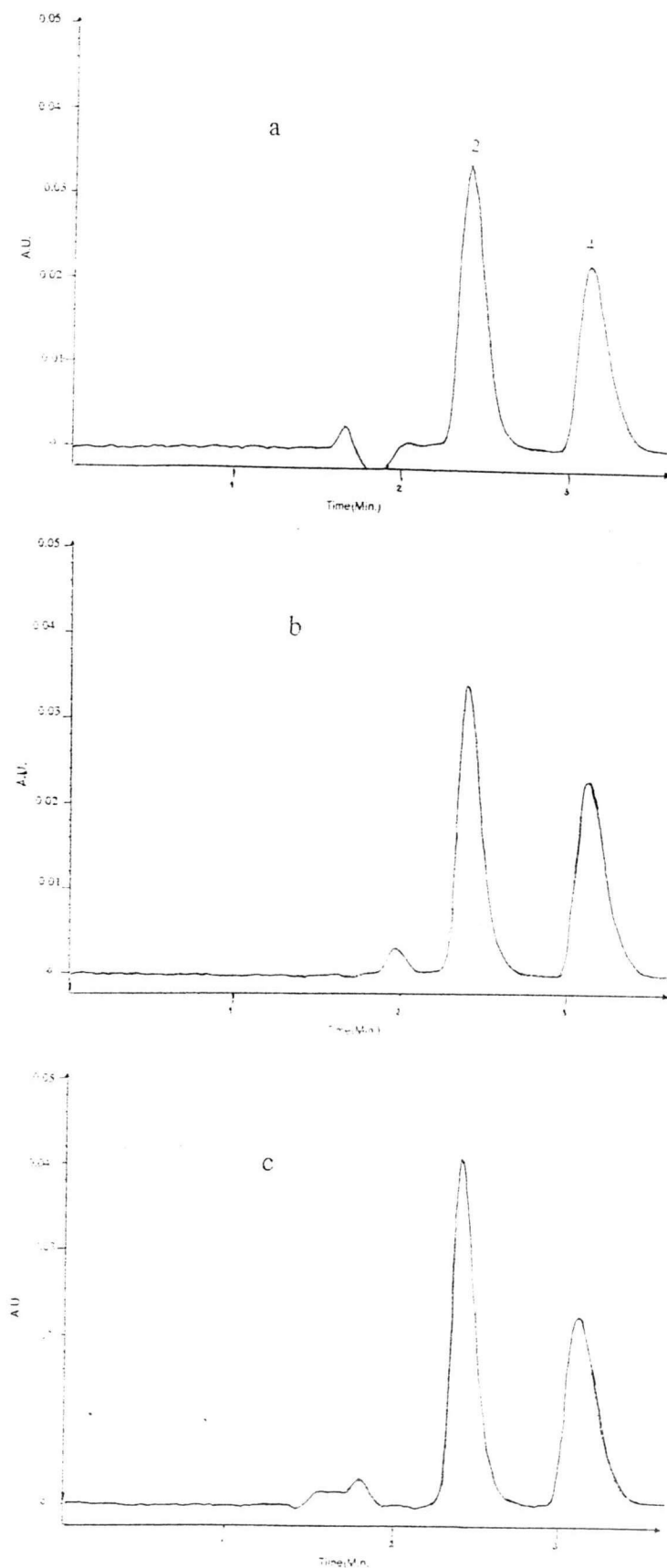


Figure F - 6 Chromatograms of standard mixtures of L-ascorbic acid (2) and salicylic acid (5). Chromatographic conditions as given in F - 5

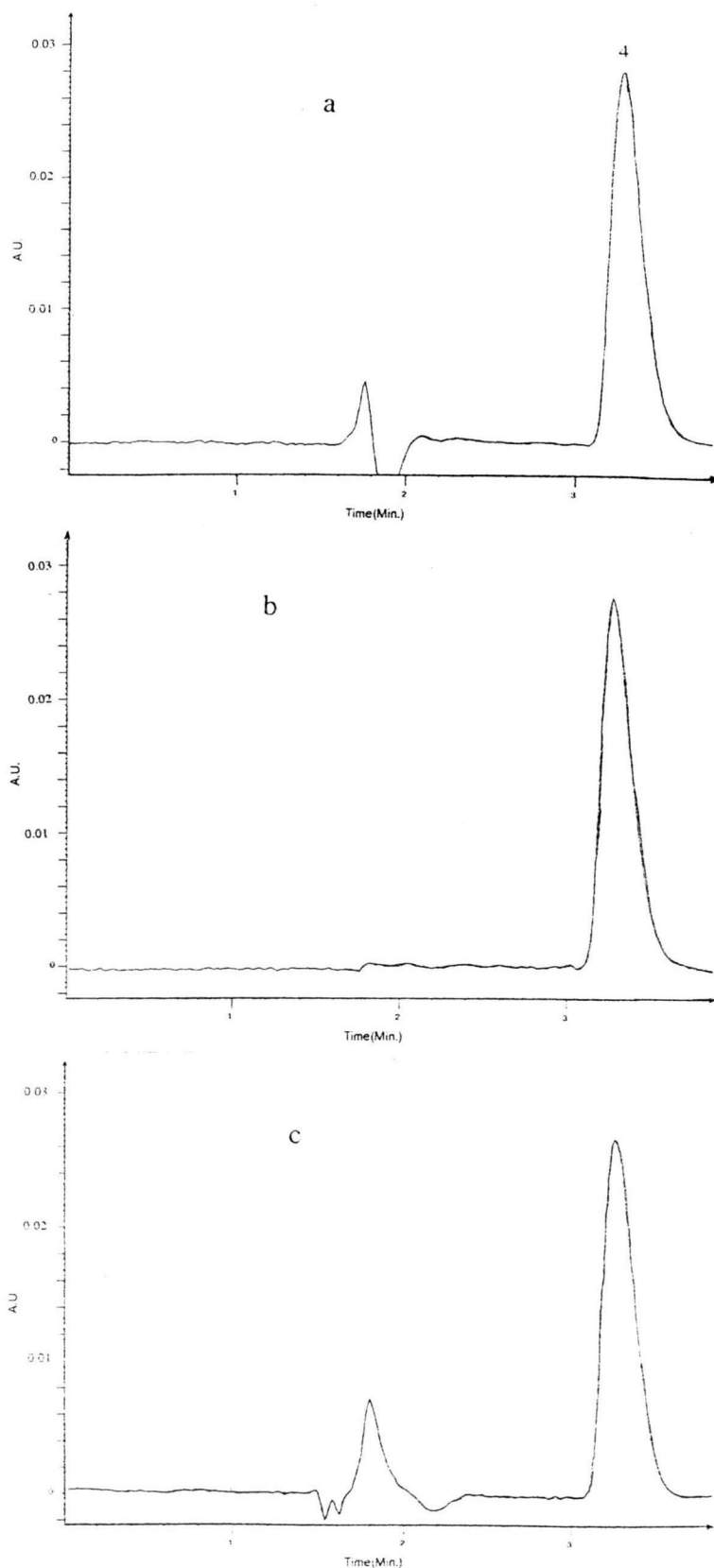


Figure F - 7 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in F - 5

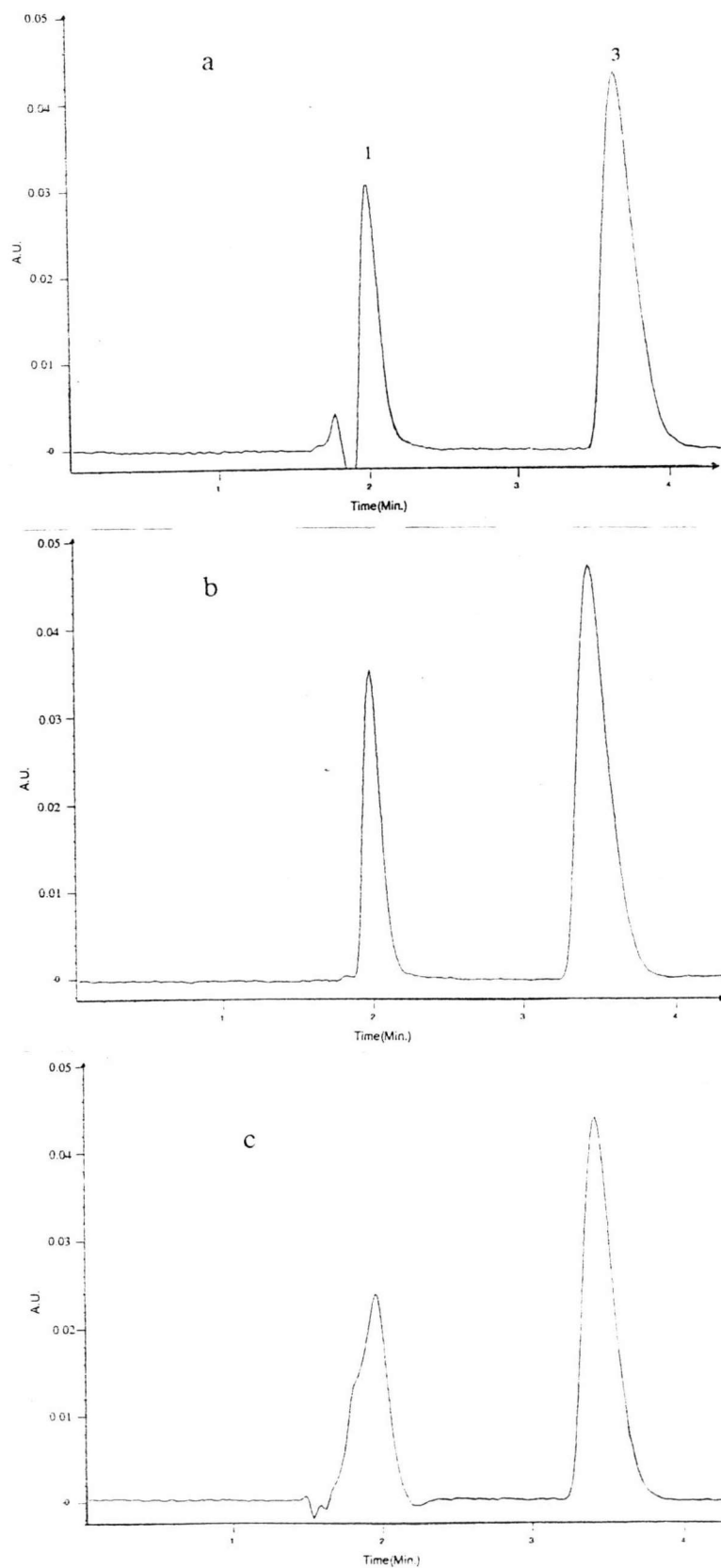


Figure F - 8 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 5.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile(a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

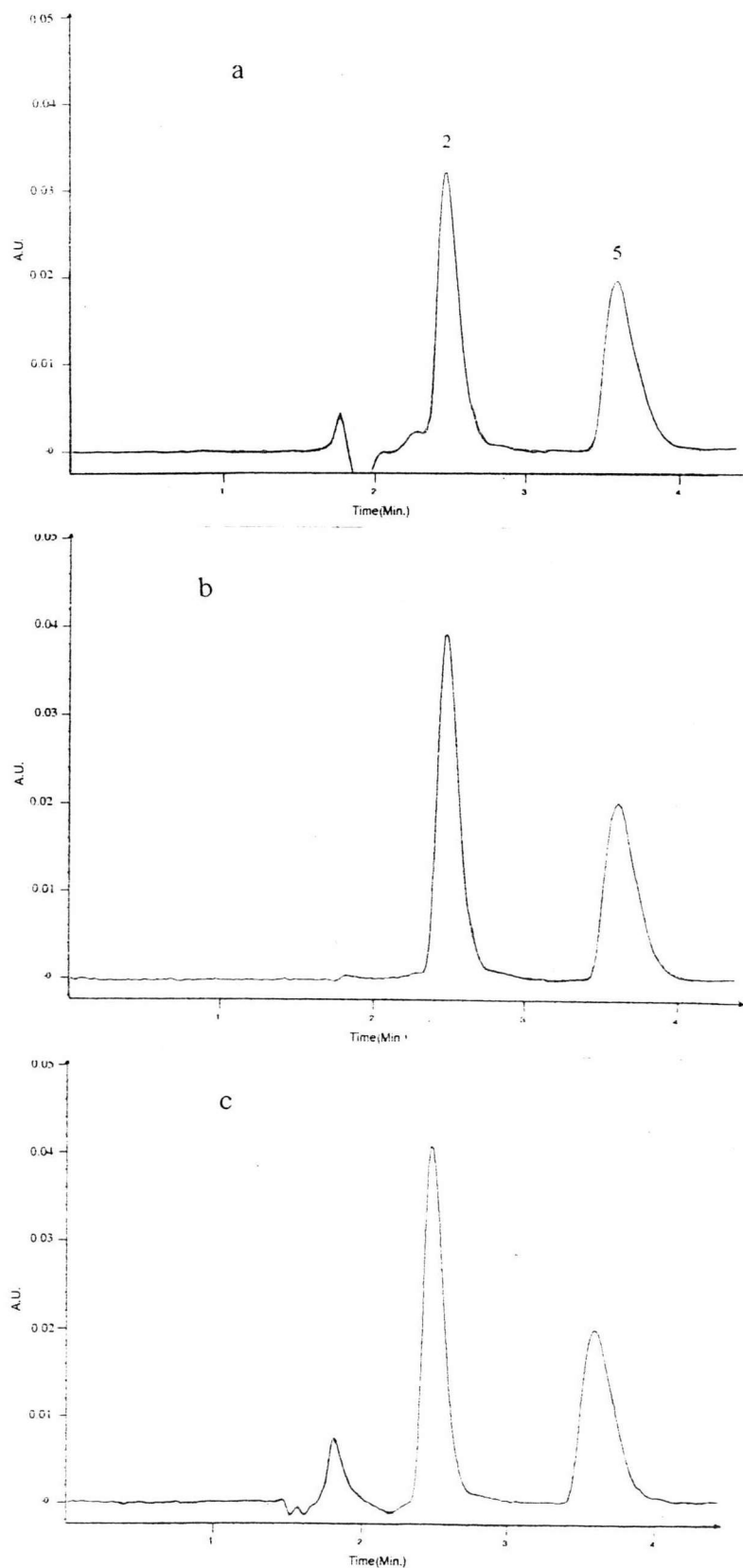


Figure F - 9 Chromatograms of standard mixtures of L-ascorbic acid (2) and salicylic acid (5). Chromatographic conditions as given in F - 8

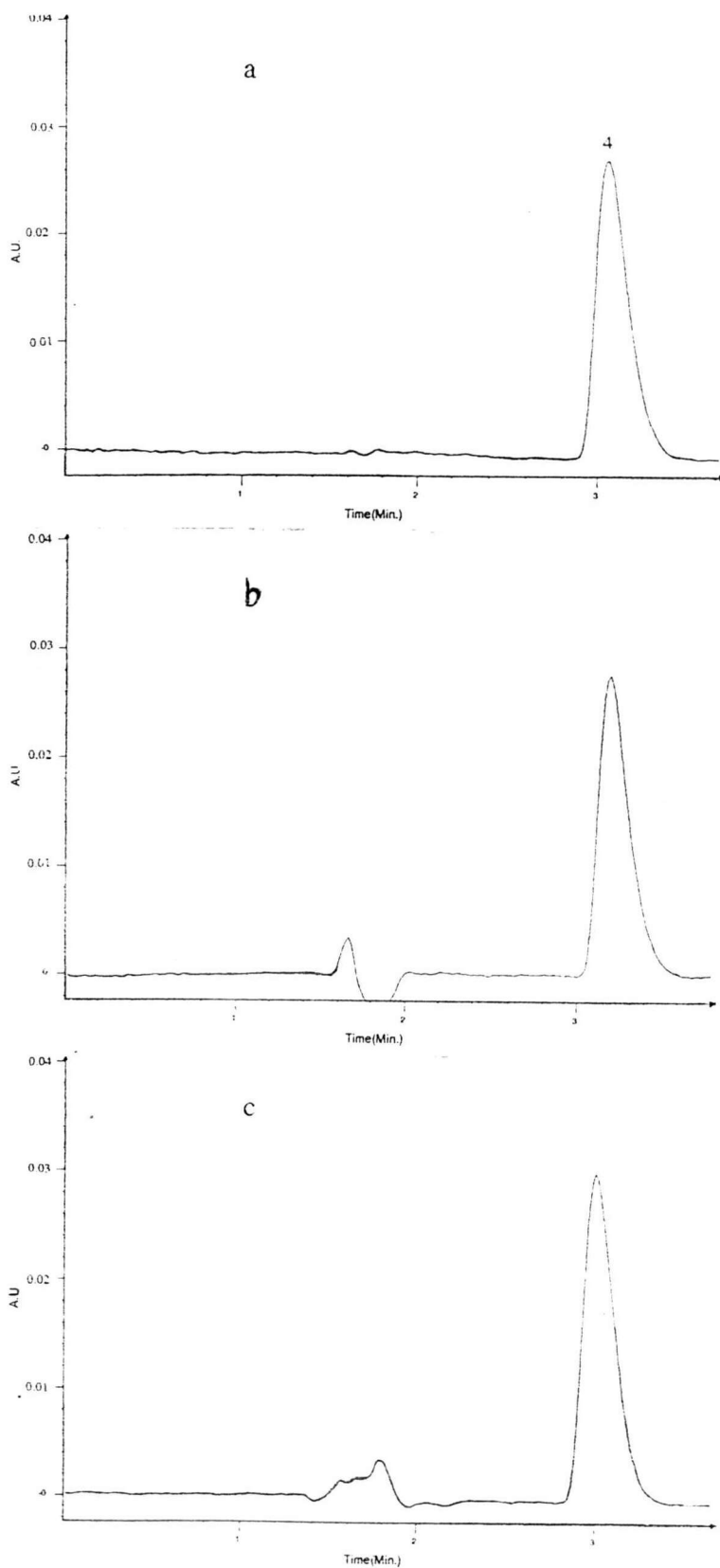


Figure F - 10 Chromatogram of standard acetylsalicylic acid (4).
Chromatographic conditions as given in F - 8

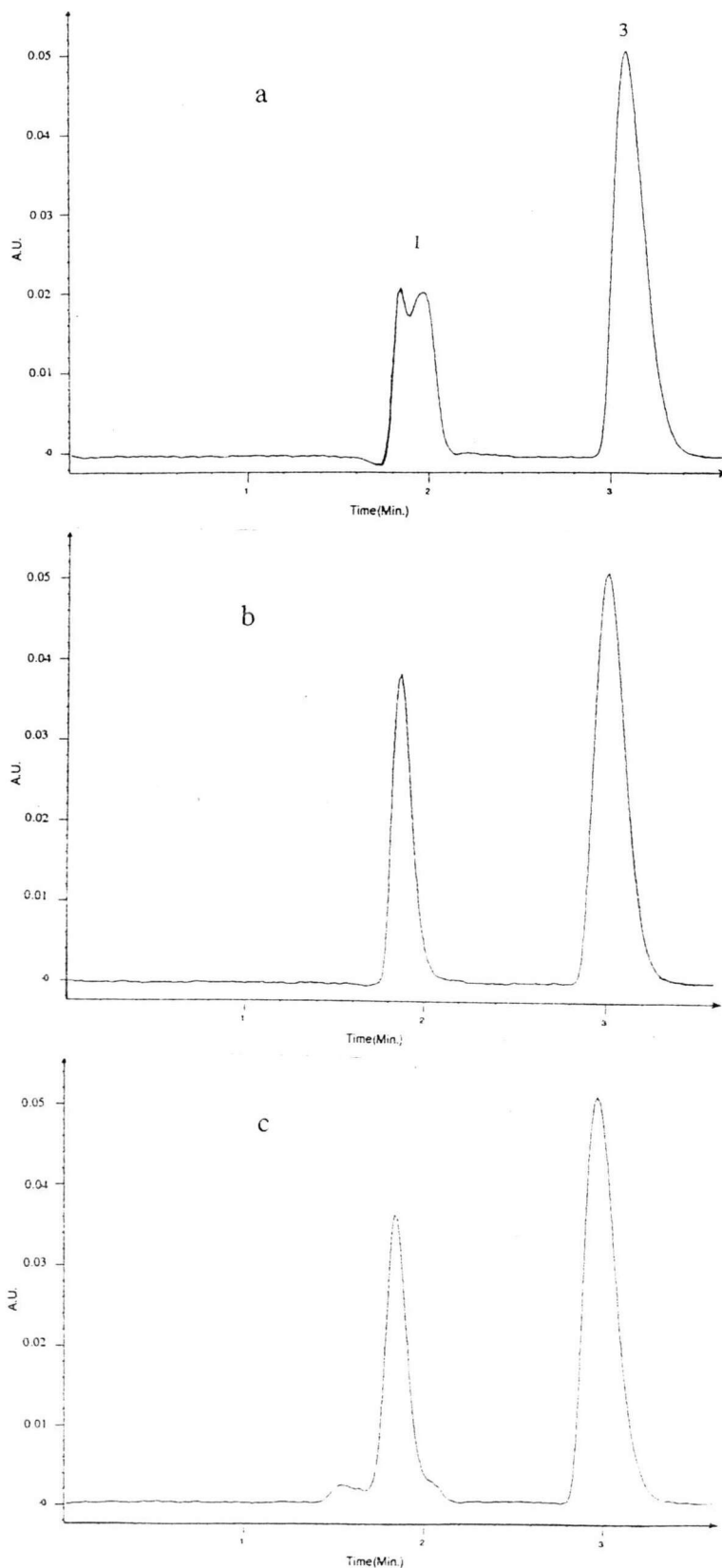


Figure F - 11 Chromatograms of standard mixtures of phenol (1) and benzoic acid (3) at pH 5.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm.I.D. dissolved in 5% (v/v) acetonitrile(a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

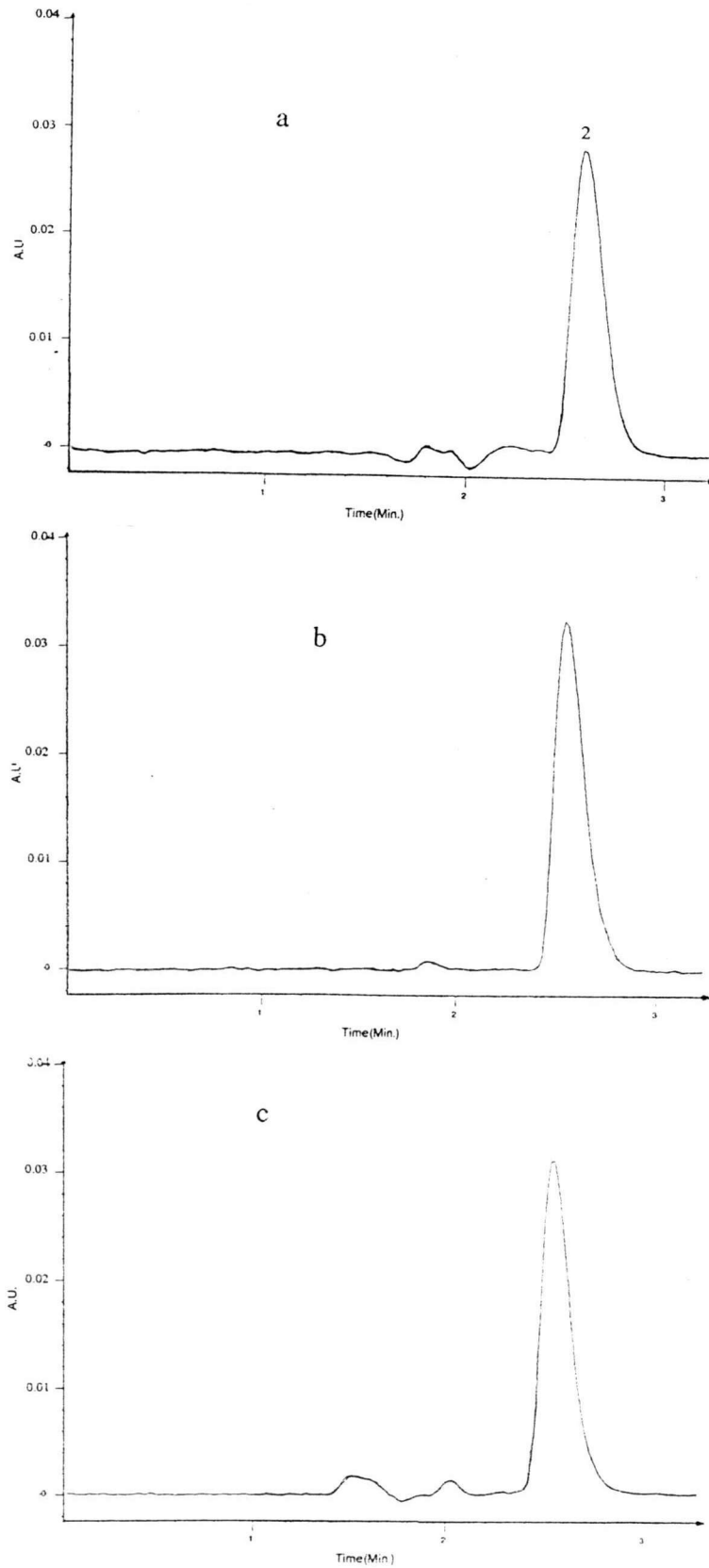


Figure F - 12 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in F - 11

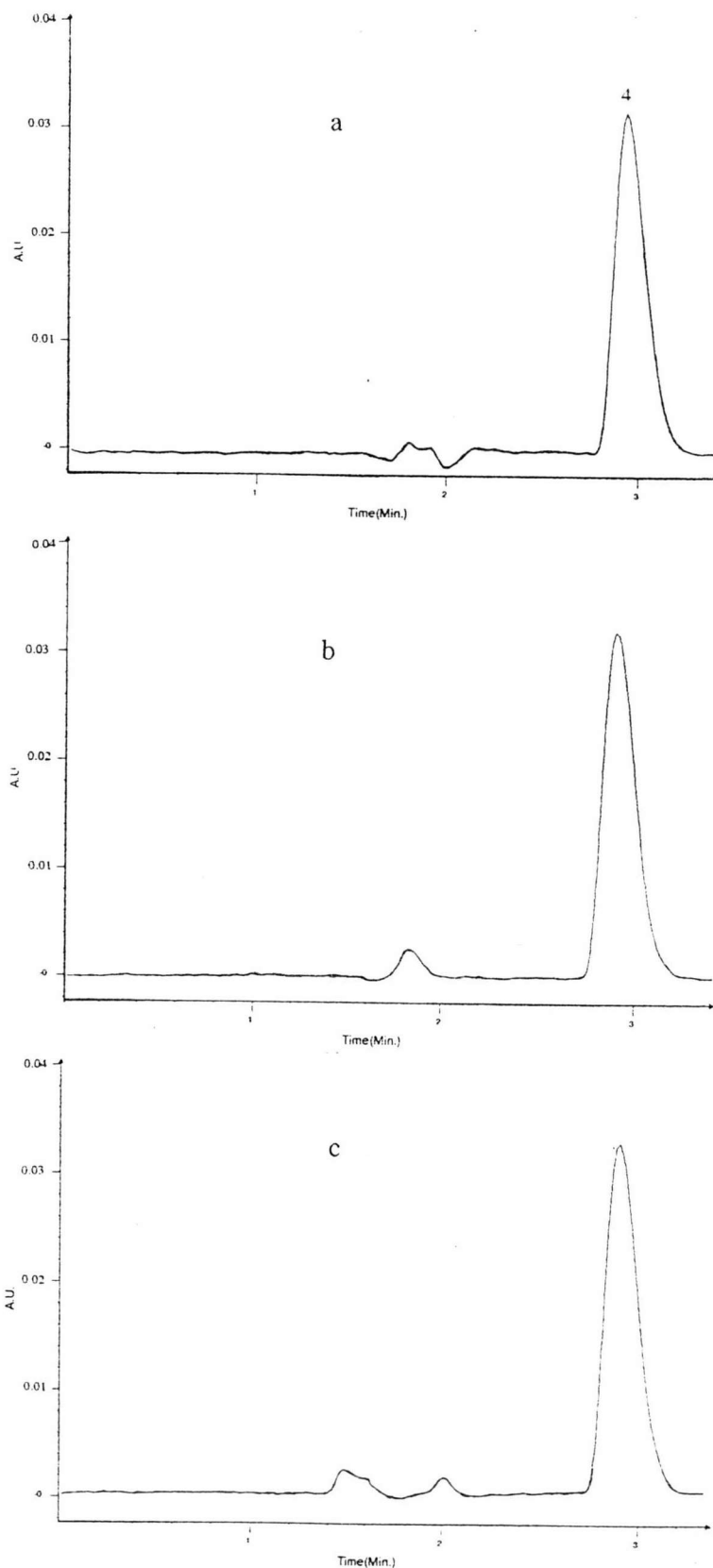


Figure F - 13 Chromatogram of standard acetylsalicylic acid (4).
Chromatographic conditions as given in F - 11

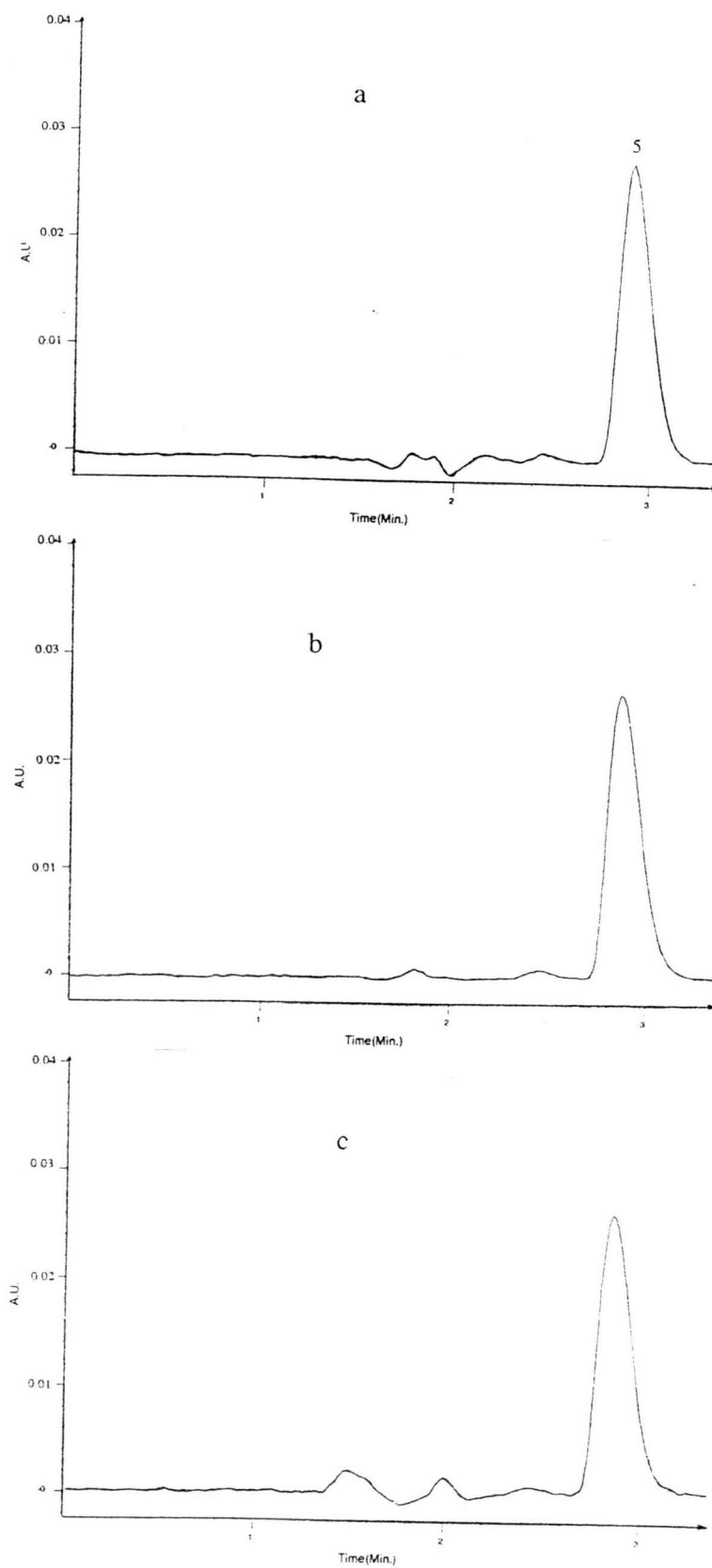


Figure F - 14 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in F - 11

APPENDIX G

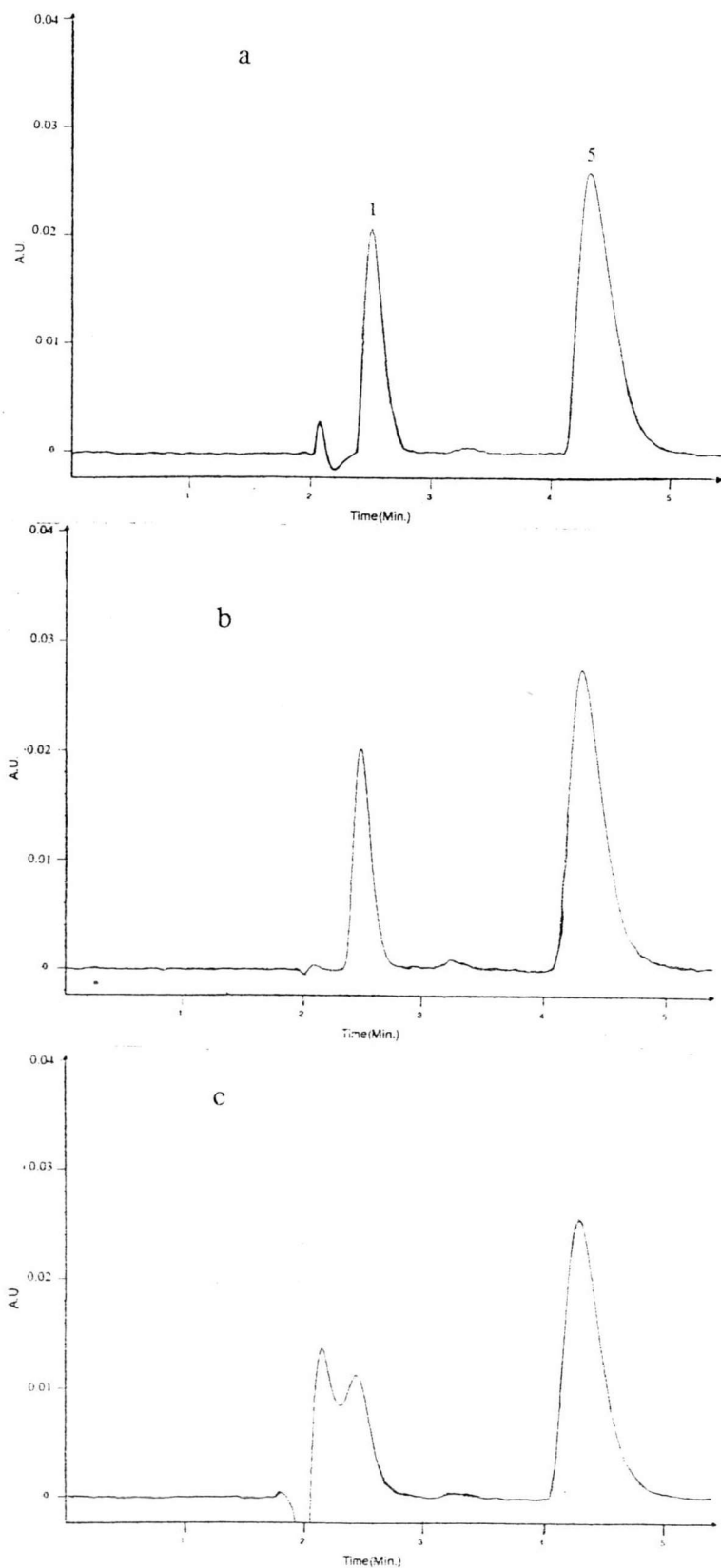


Figure G - 1 Chromatograms of standard mixtures of phenol (1) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

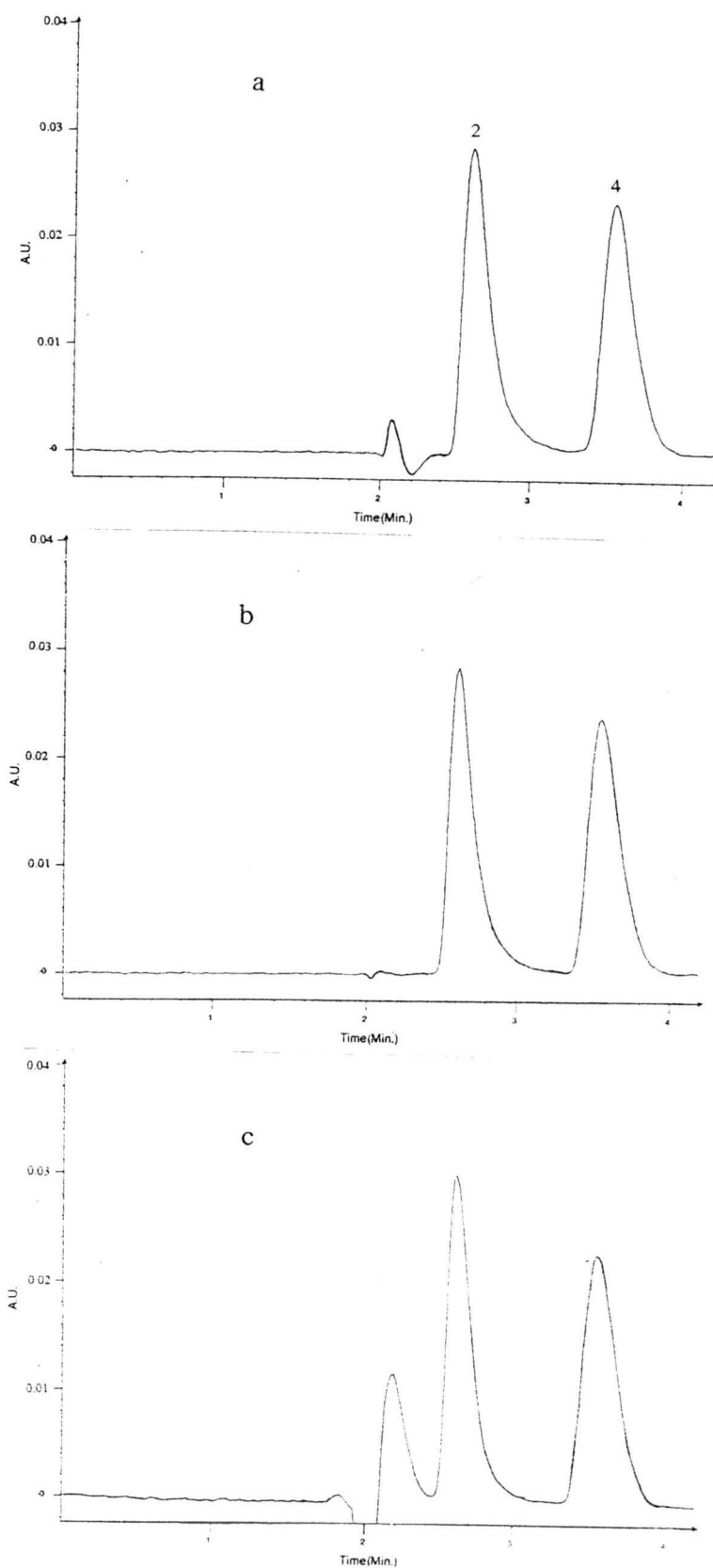


Figure G - 2 Chromatograms of standard L-ascorbic acid (2) and acetylsalicylic acid(4). Chromtographic conditions as given in G - 1

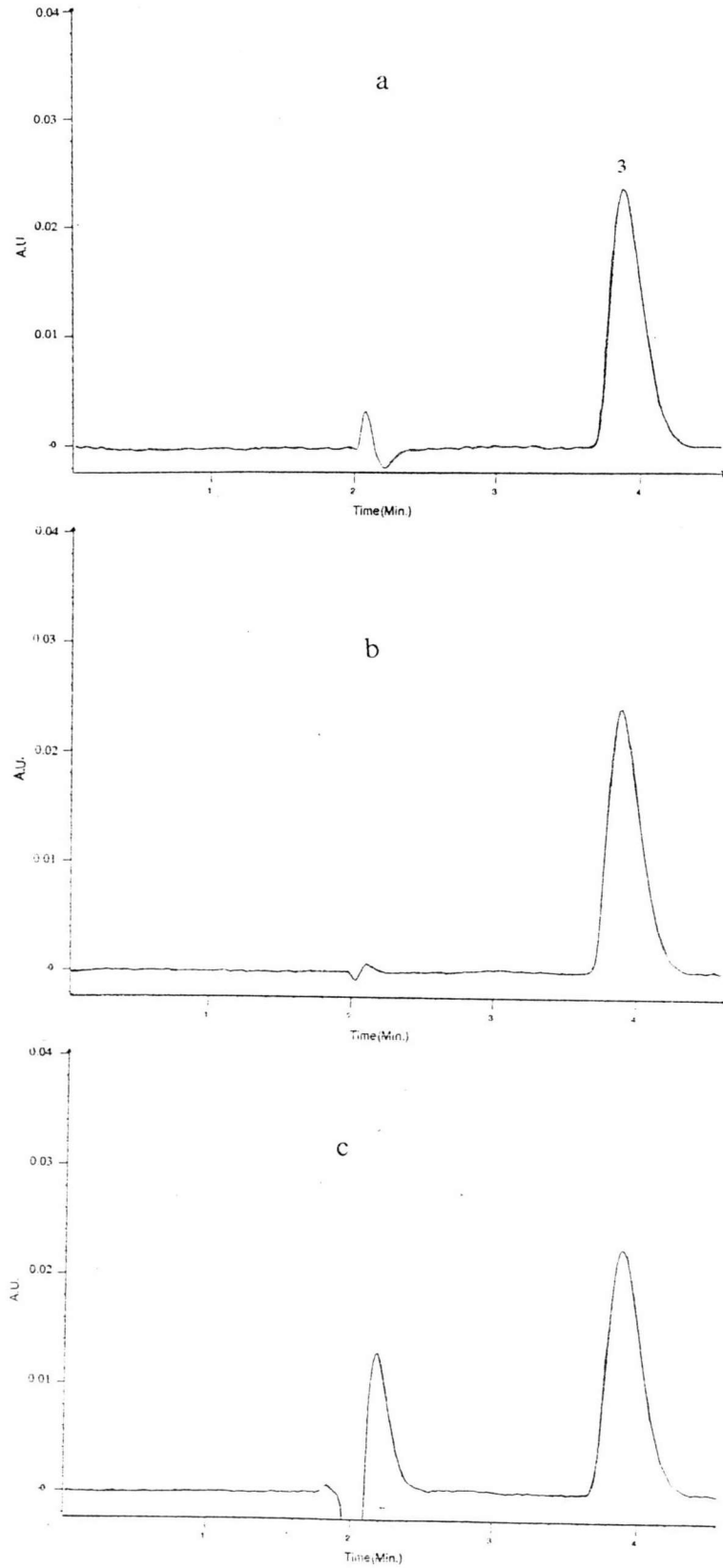


Figure G - 3 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in G - 1

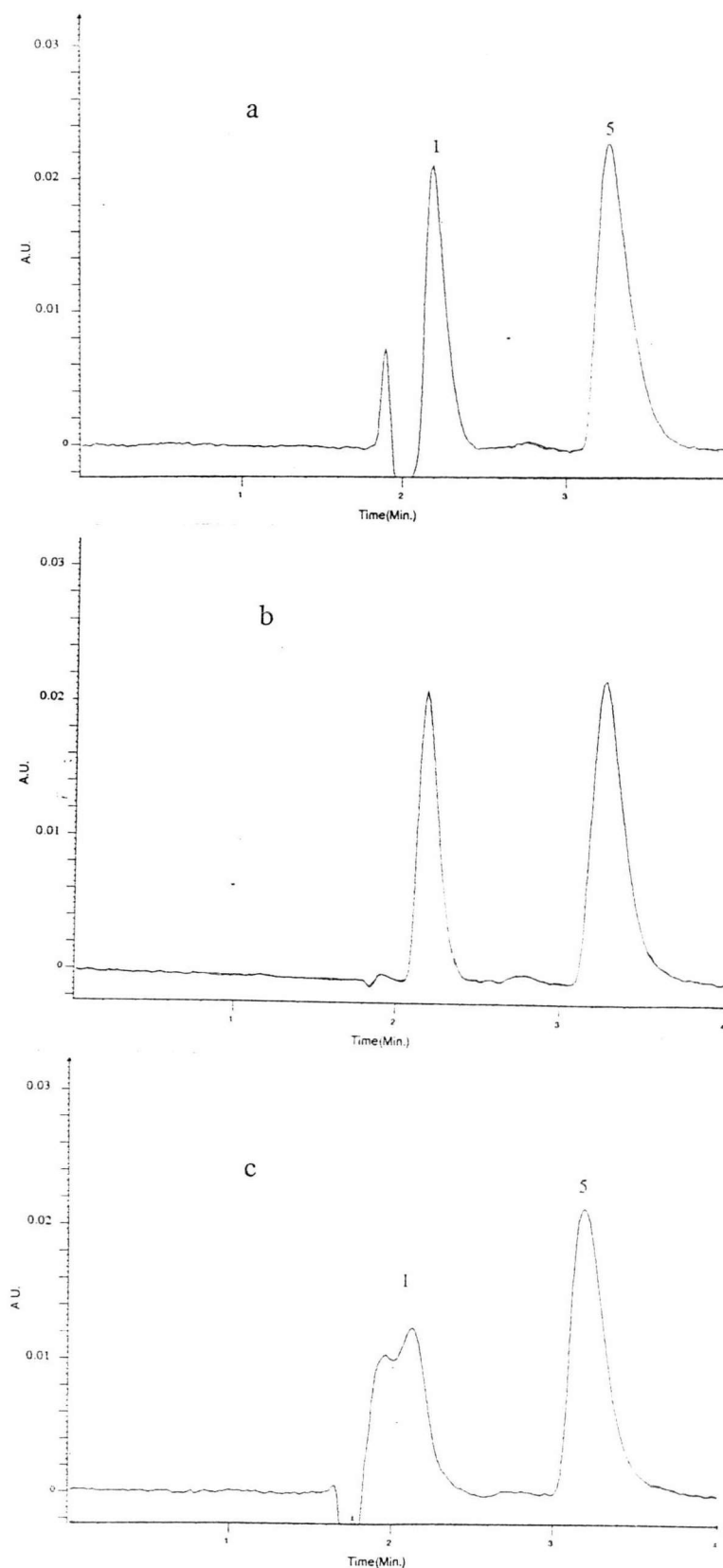


Figure G - 4 Chromatograms of standard mixtures of phenol (1) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

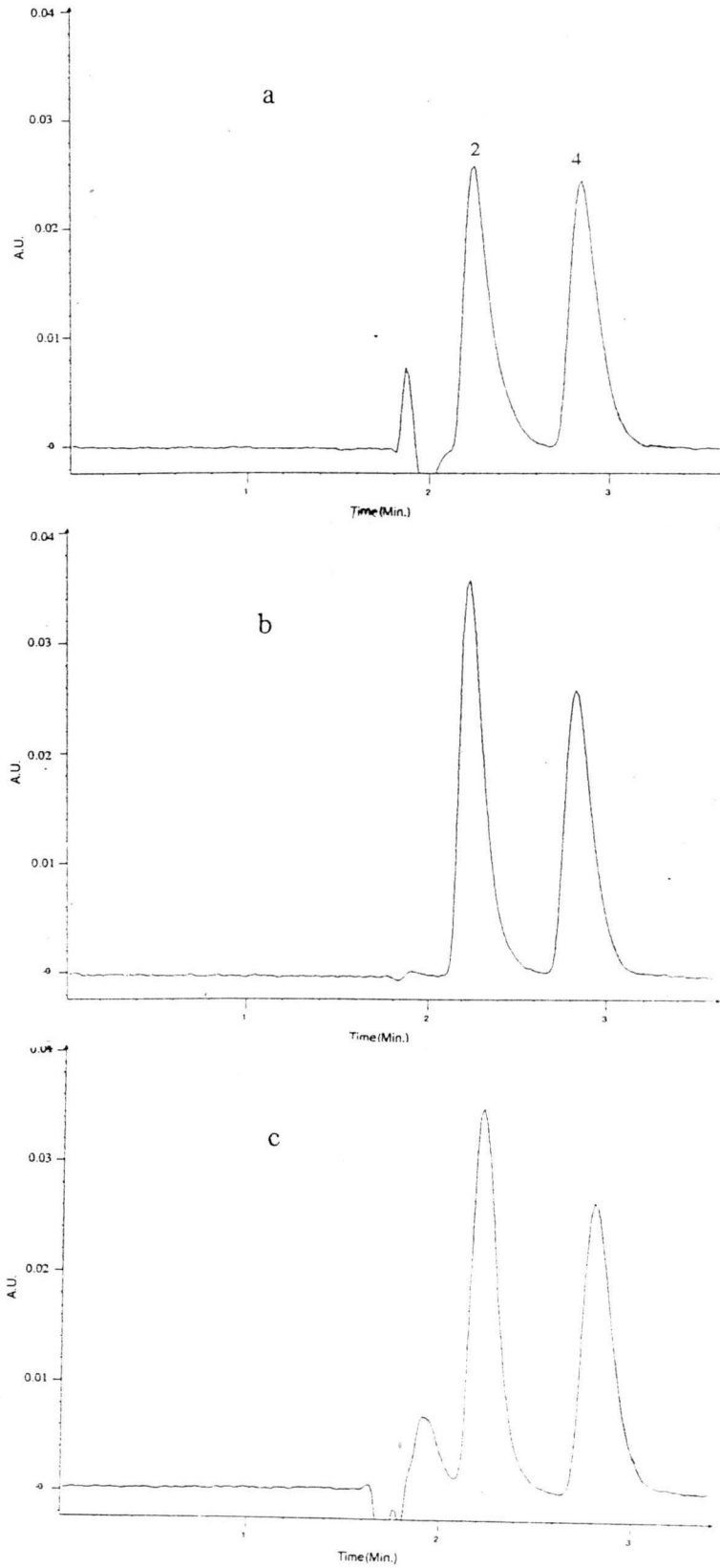


Figure G - 5 Chromatograms of standard L-ascorbic acid (2) acetylsalicylic acid (4). Chromatographic conditions as given in G - 4

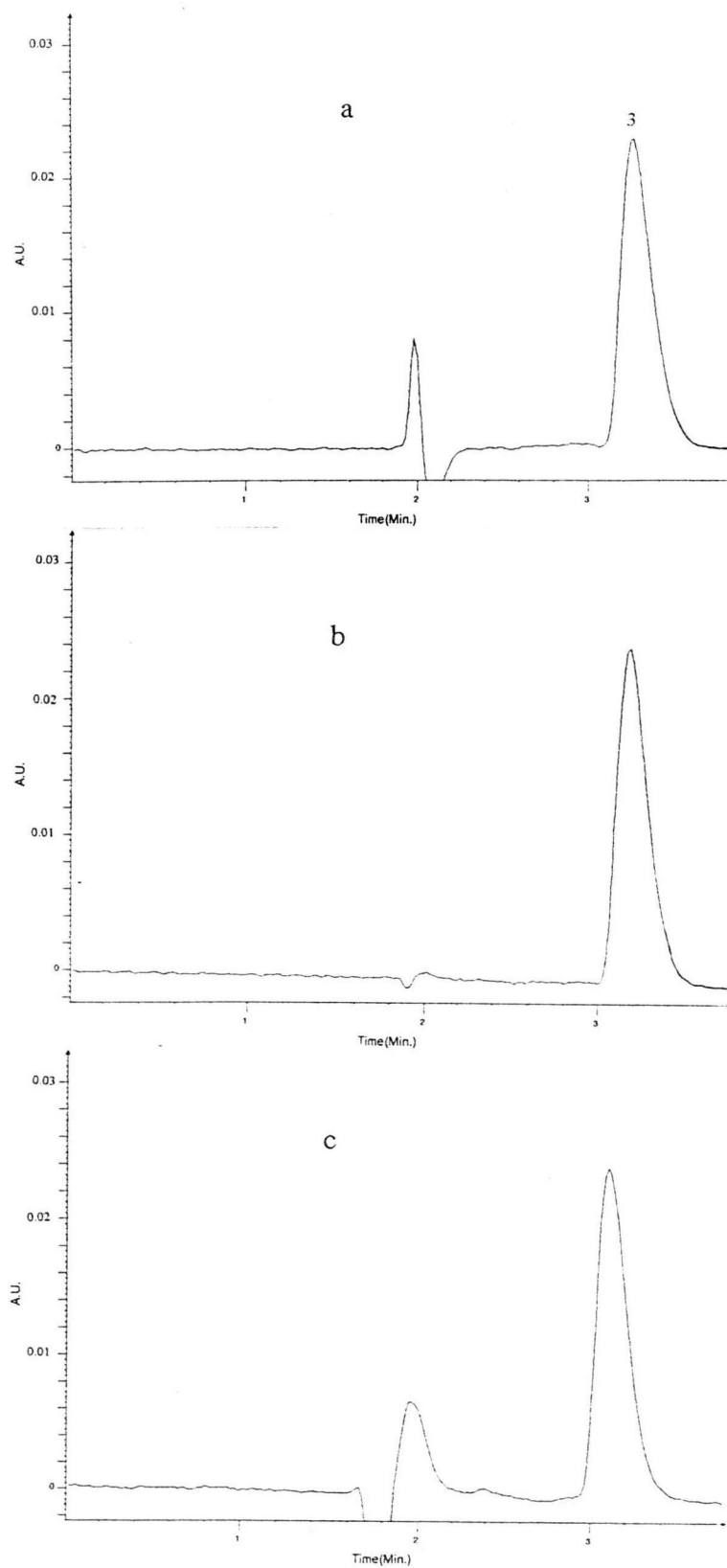


Figure G - 6 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in G - 4

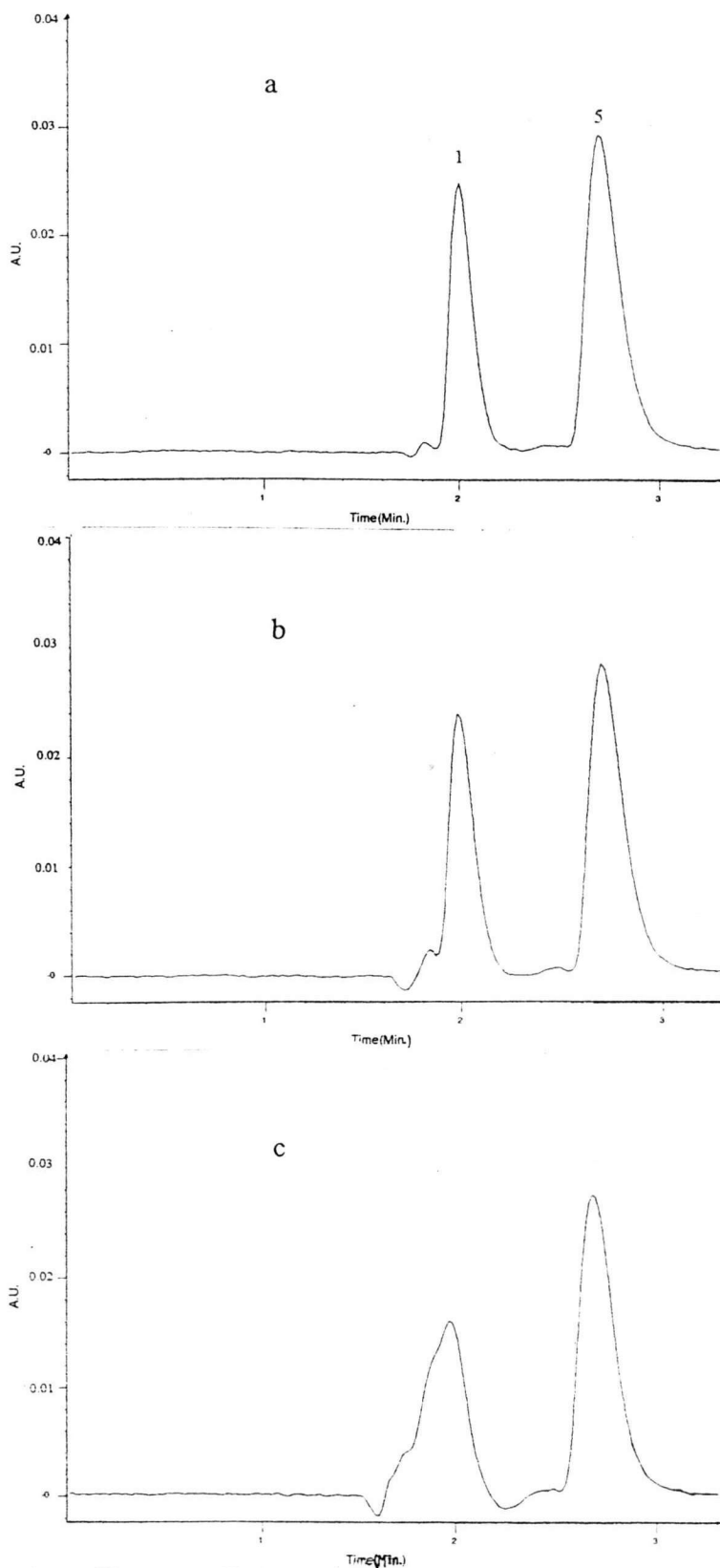


Figure G - 7 Chromatograms of standard mixture of phenol (1) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μ m 4.6 mm.I.D. x 15 cm. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

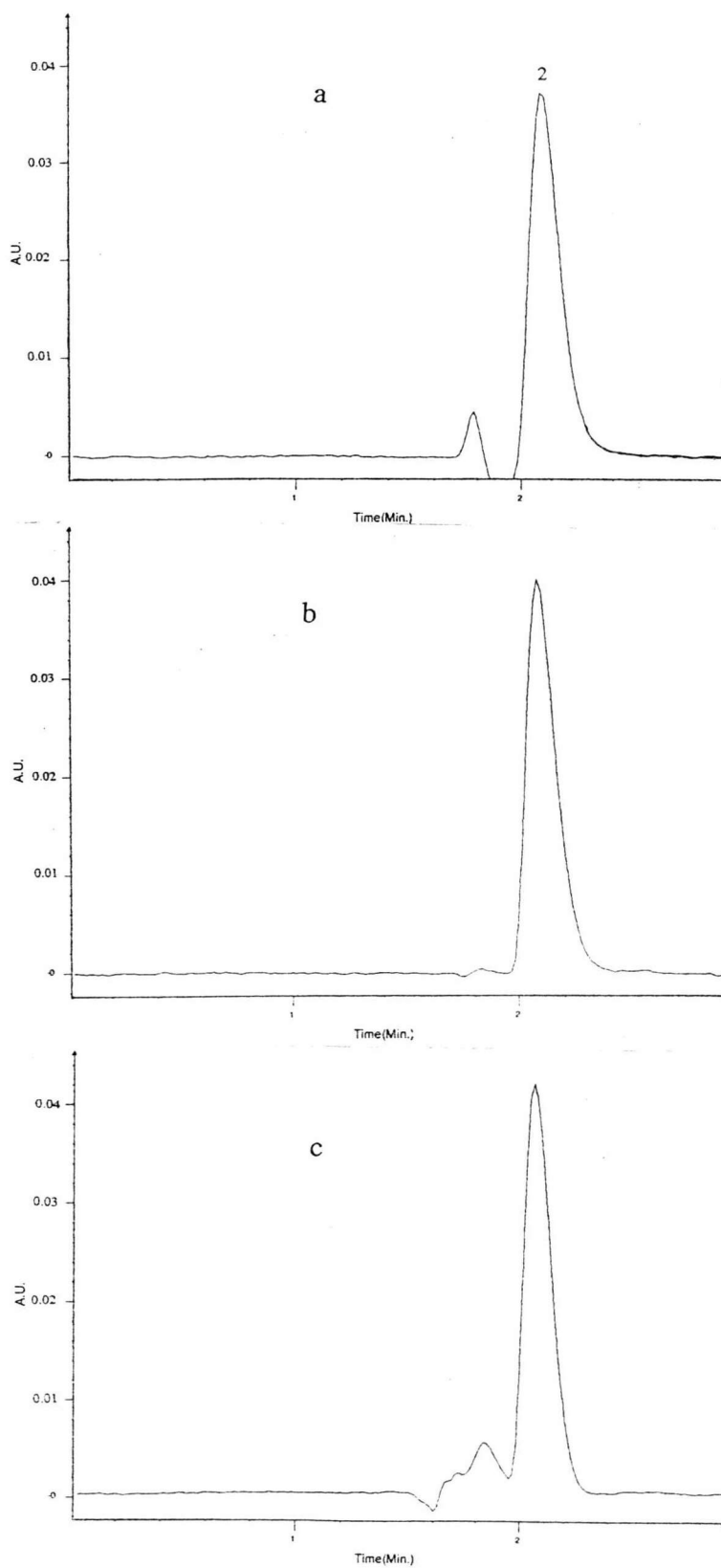


Figure G - 8 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in G - 7

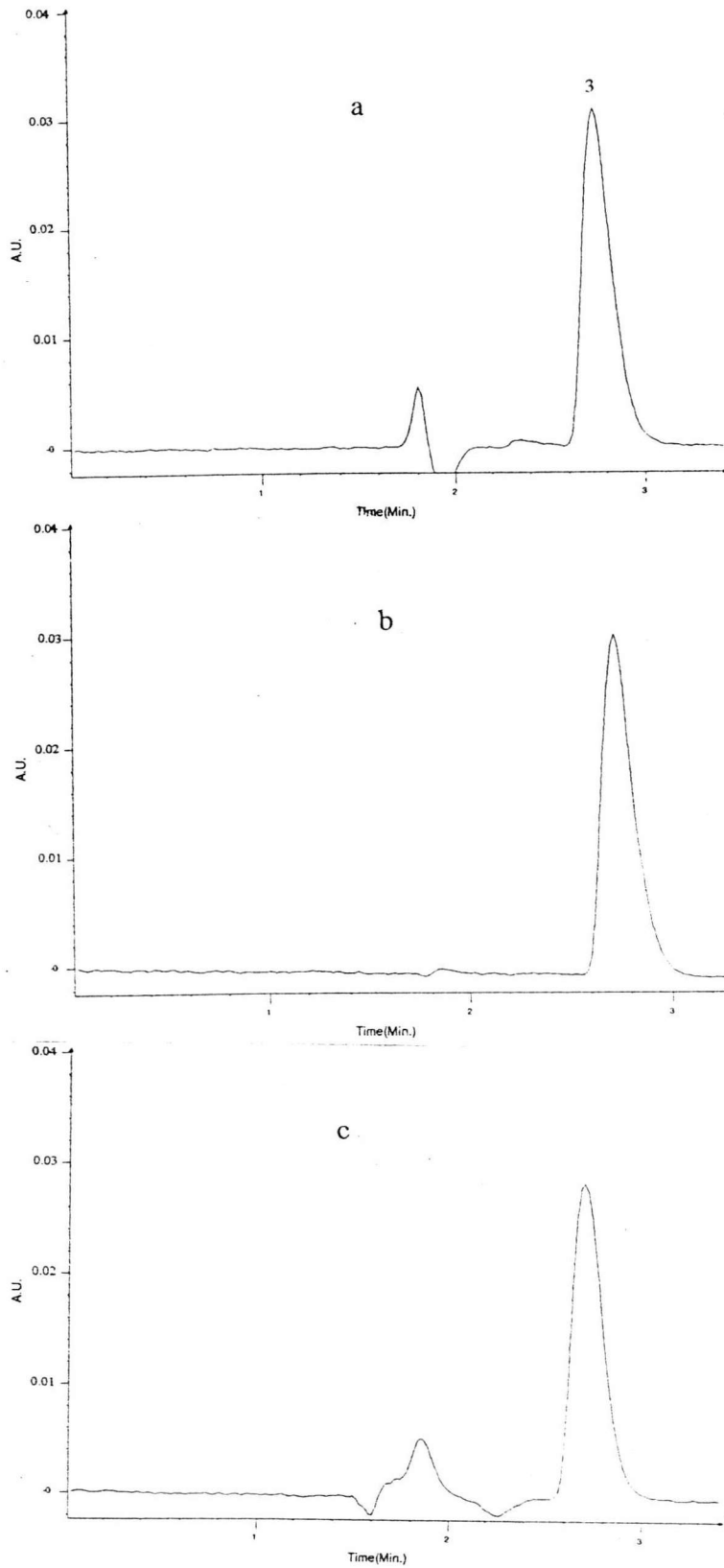


Figure G - 9 Chromatogram at pH 5.5 of standard benzoic acid (3).
Chromatographic conditions as given in G - 7

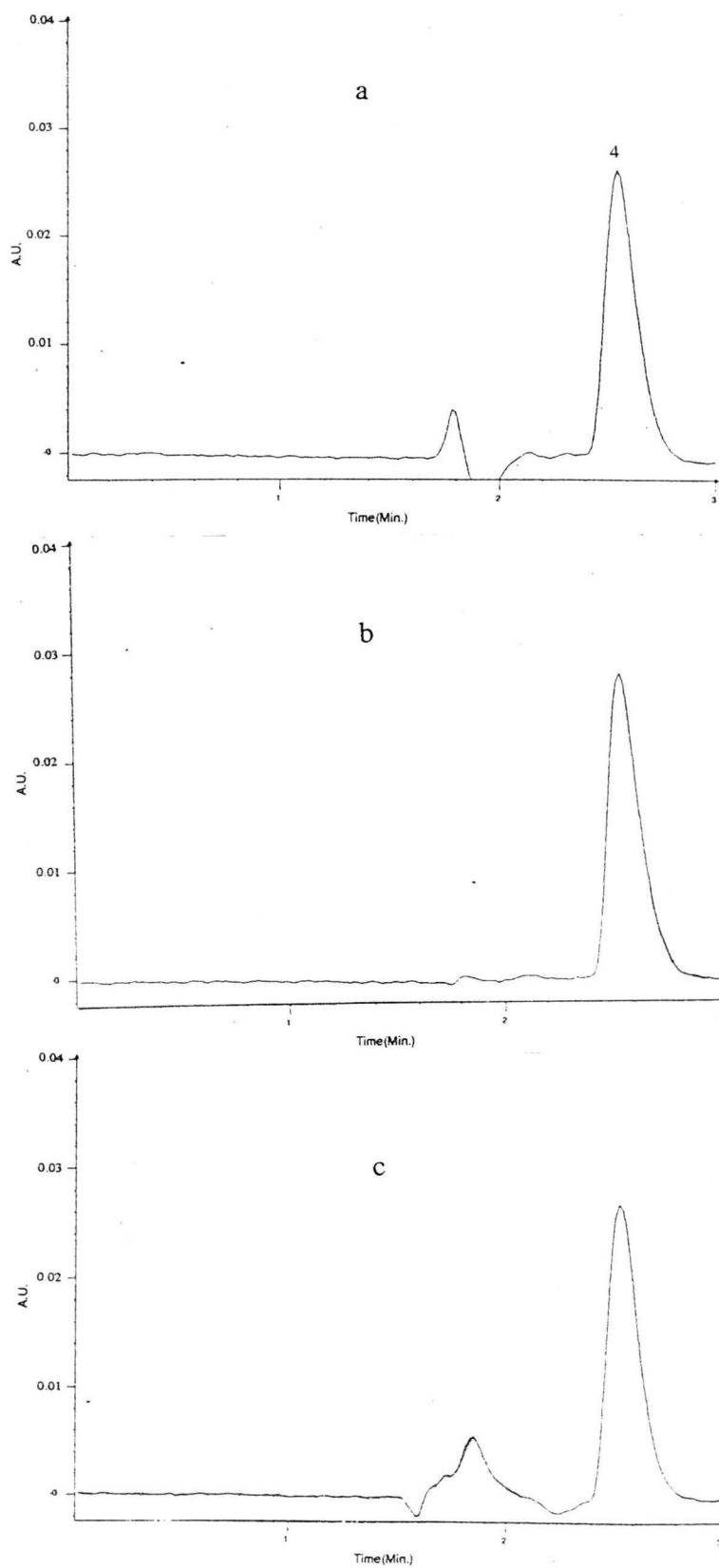


Figure G - 10 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in G - 7

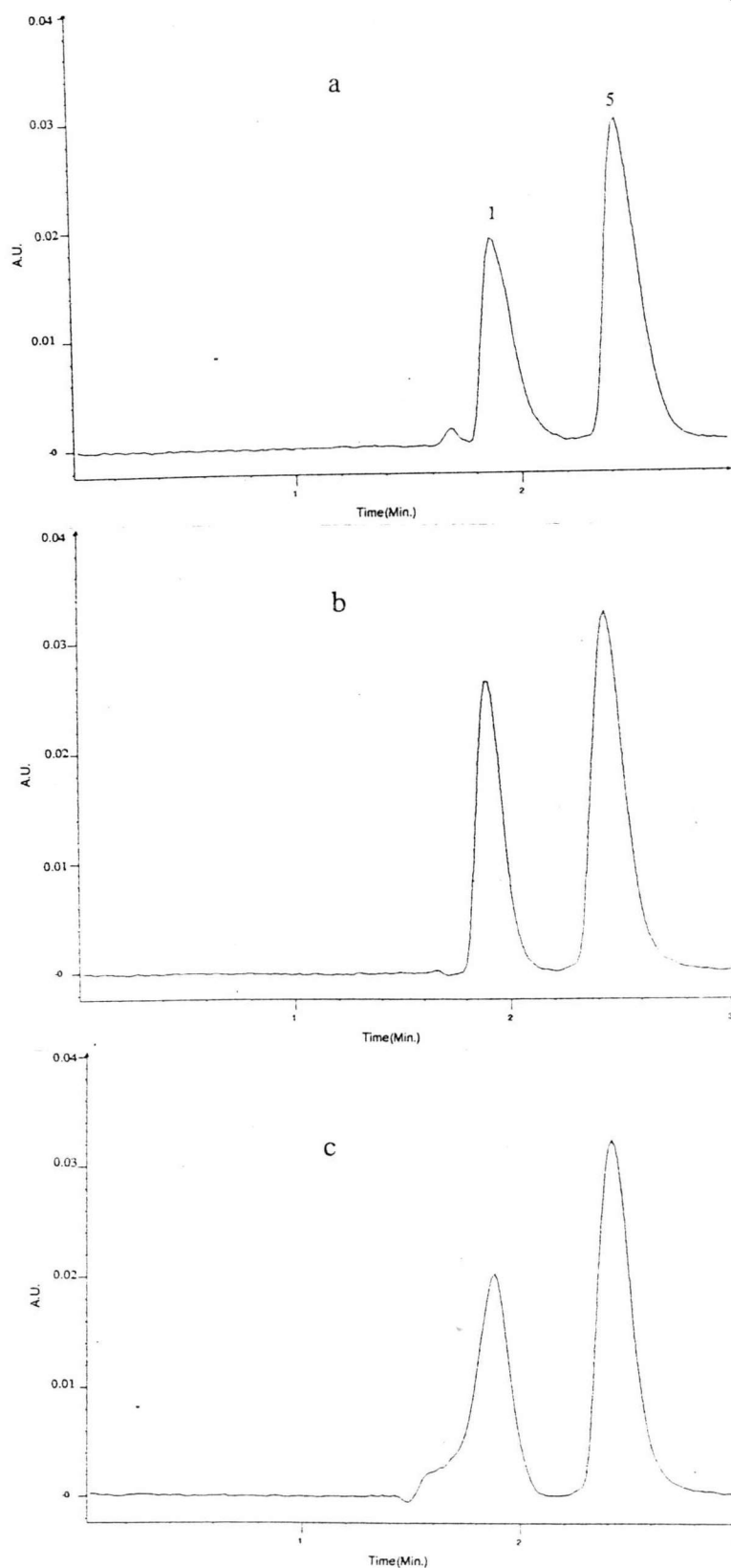


Figure G - 11 Chromatograms of standard mixtures of phenol (1) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

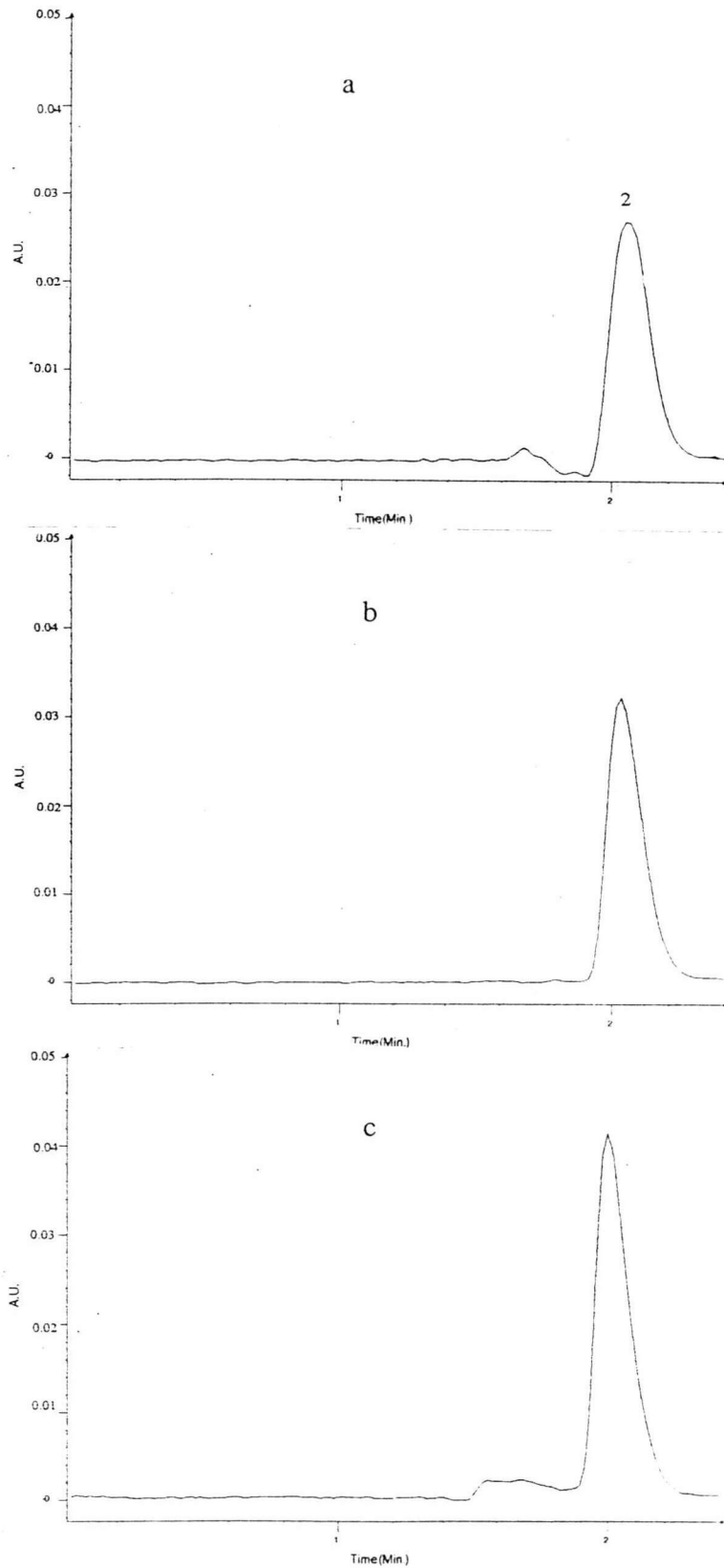


Figure G - 12 Chromatograms of standard L-ascorbic acid (2). Chromatographic conditions as given in G - 11

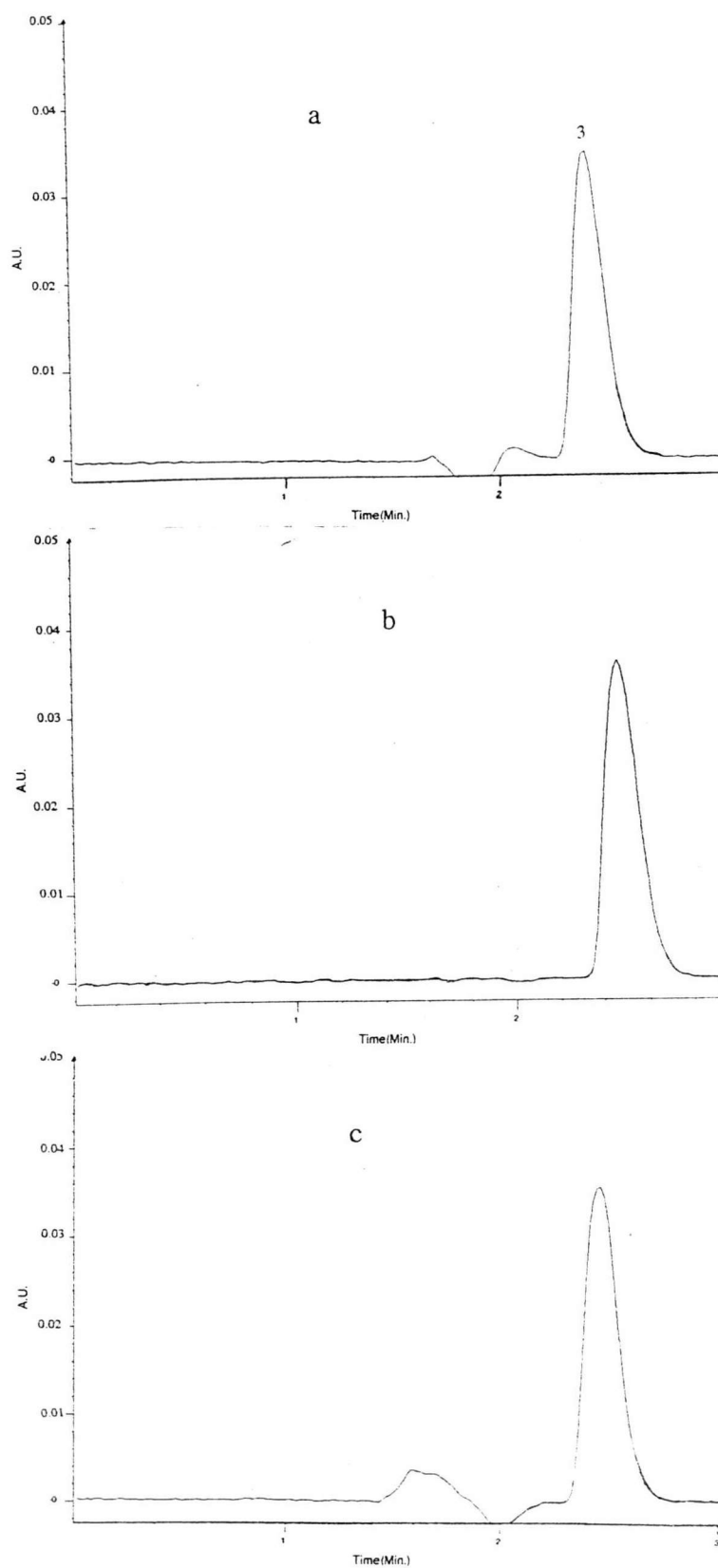


Figure G - 13 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in G - 11

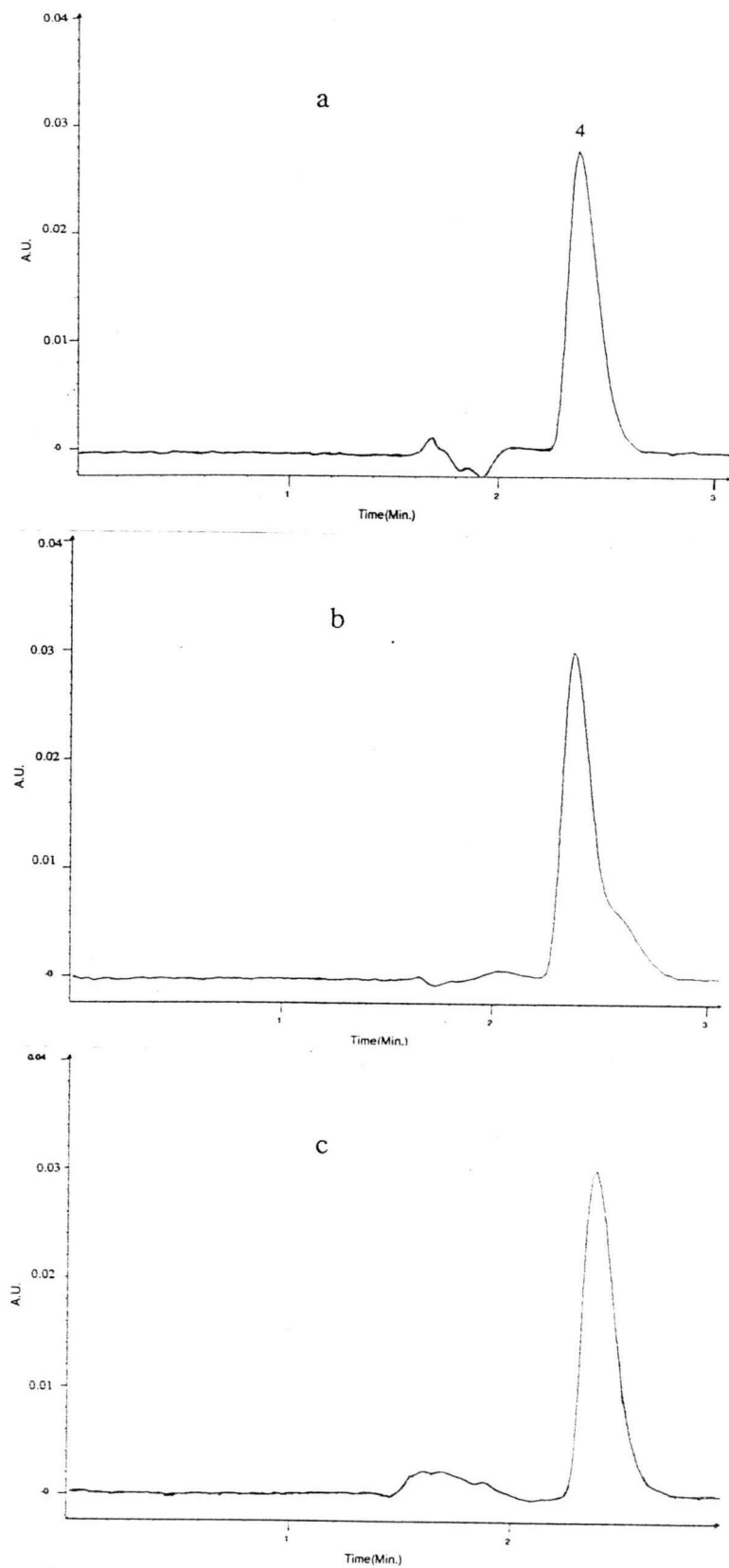


Figure G - 14 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in G - 11

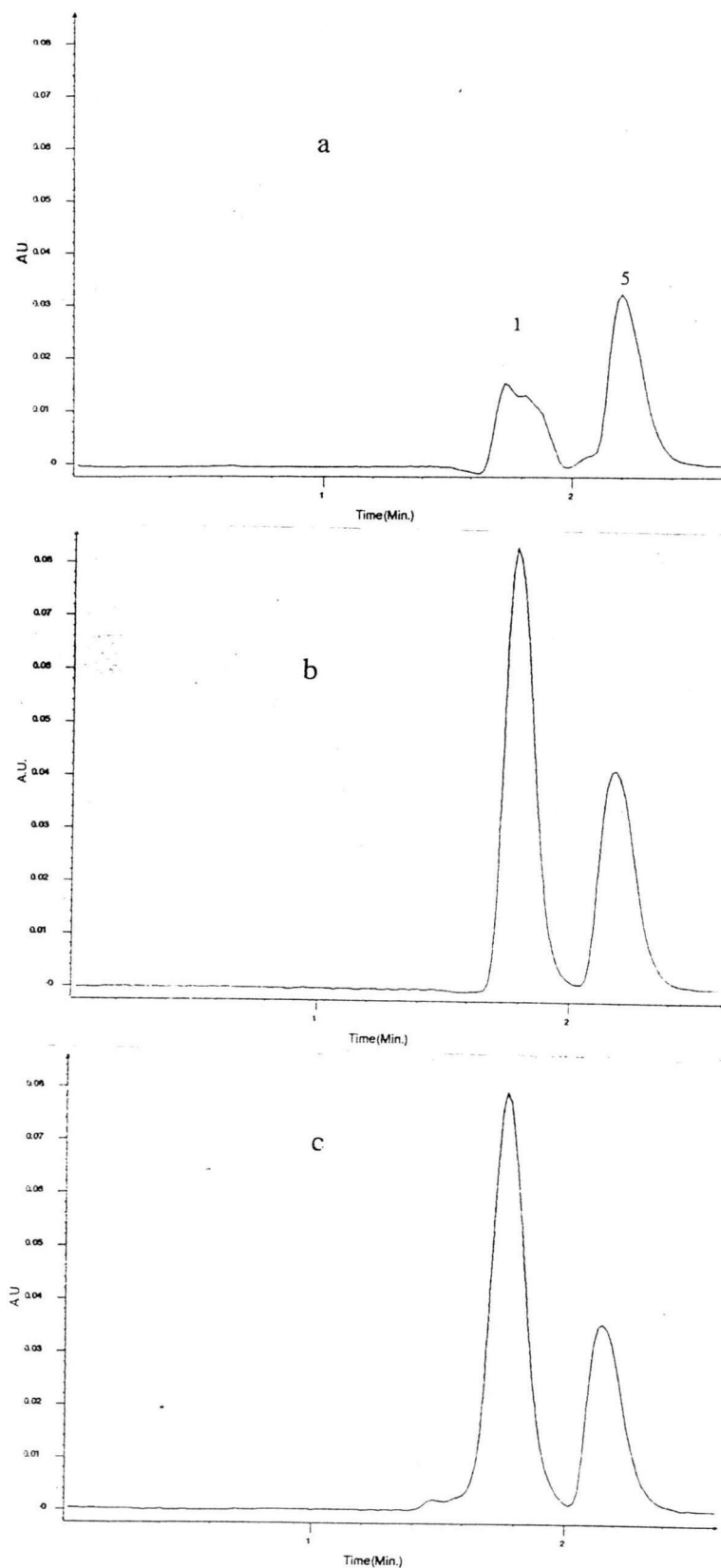


Figure G - 15 Chromatograms of standard mixtures of phenol (1) and salicylic acid (5) at pH 4.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

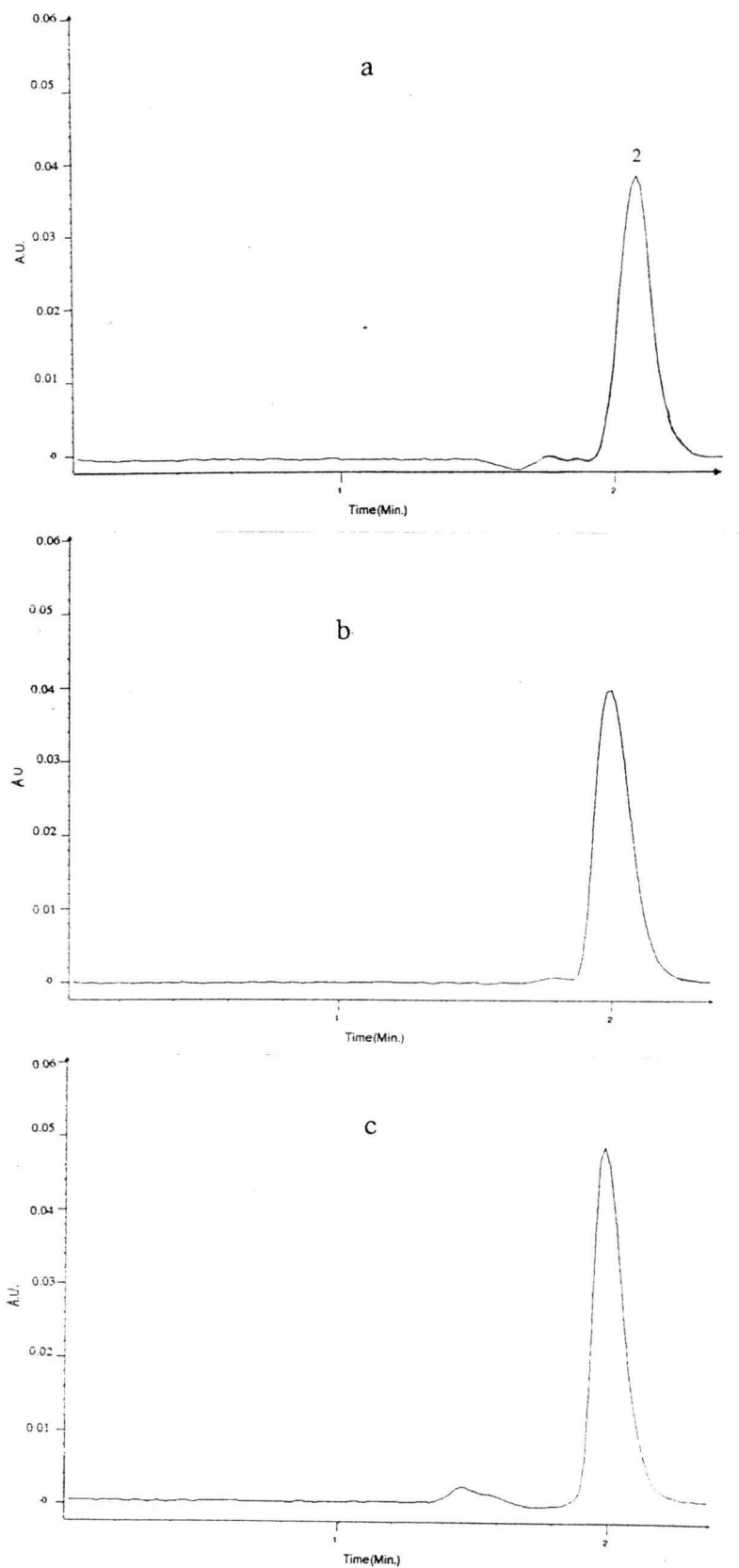


Figure G - 16 Chromatograms of standard L-ascorbic acid (2). Chromatographic conditions as given in G - 15

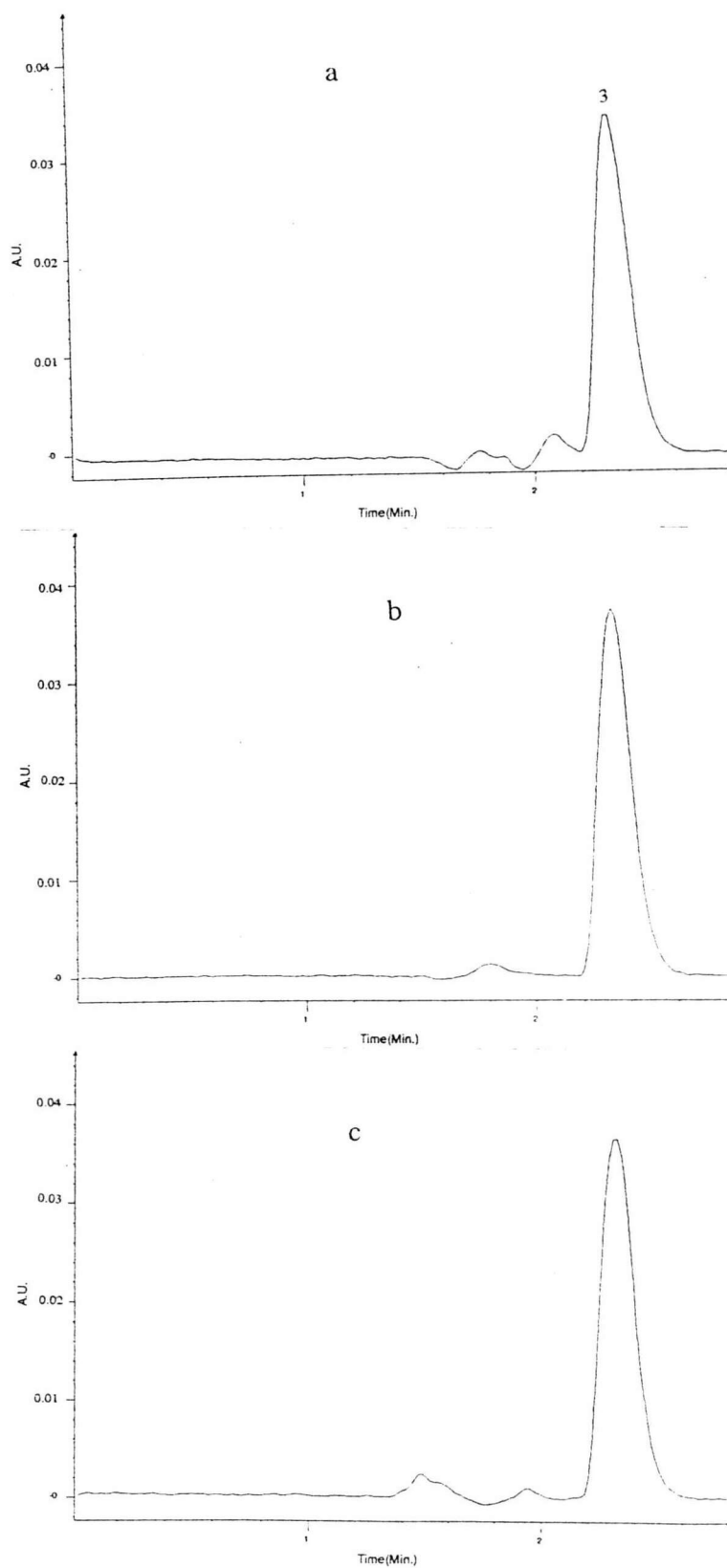


Figure G - 17 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in G - 15

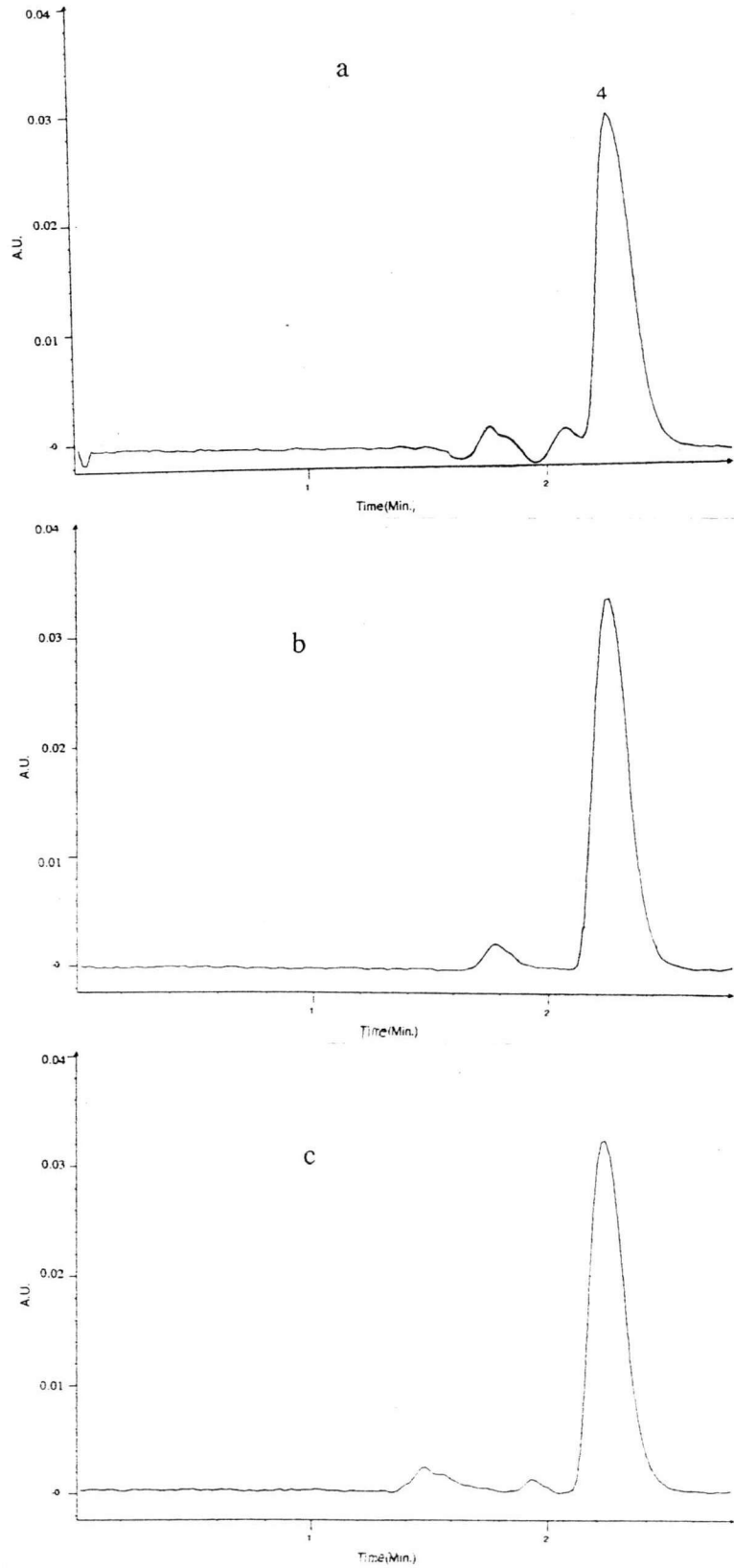


Figure G - 18 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in G - 15

APPENDIX H

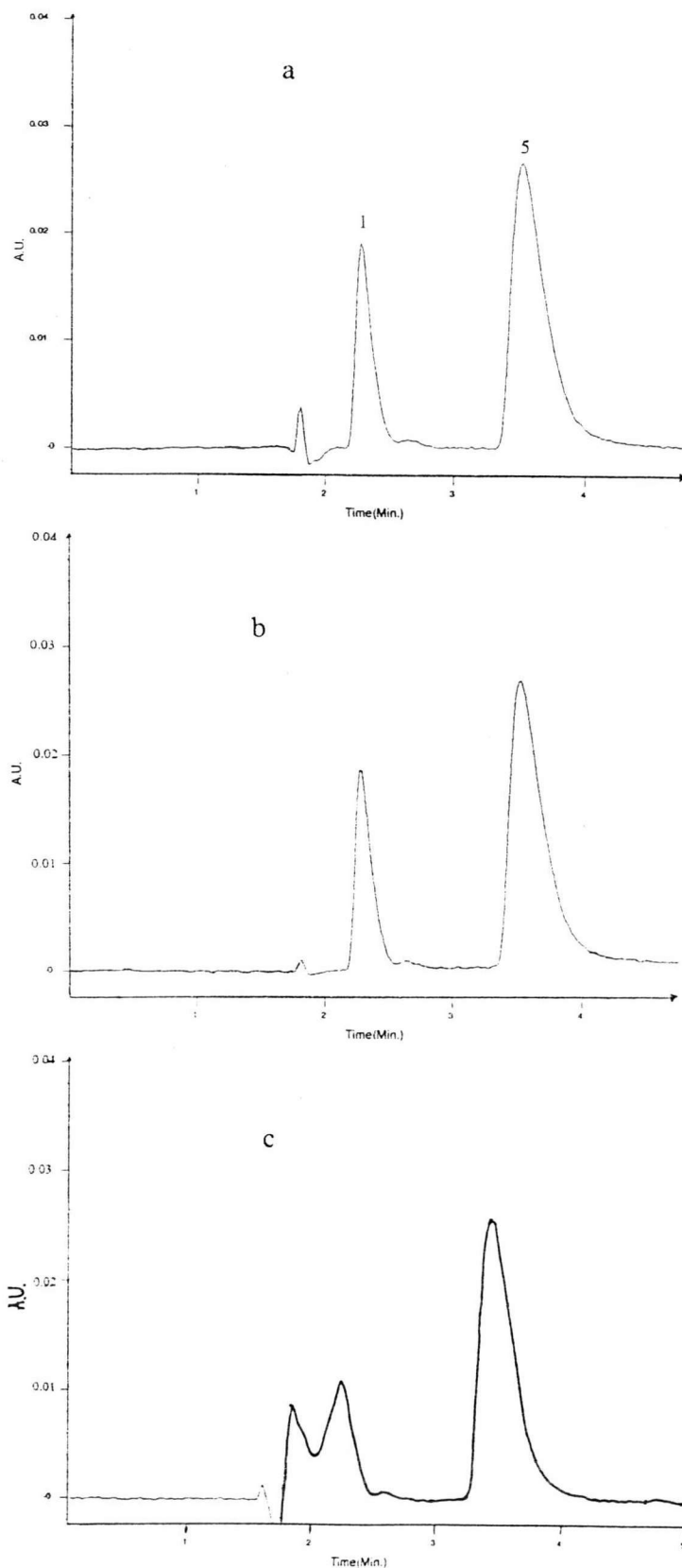


Figure H - 1 Chromatograms of standard mixtures of phenol (1) and salicylic acid (5) at pH 6.0 on phenylpropanolamine column, 5 μm , 150 \times 4.6 mm. I.D. dissolved in 5% (v/v) acetonitrile (a), 10% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

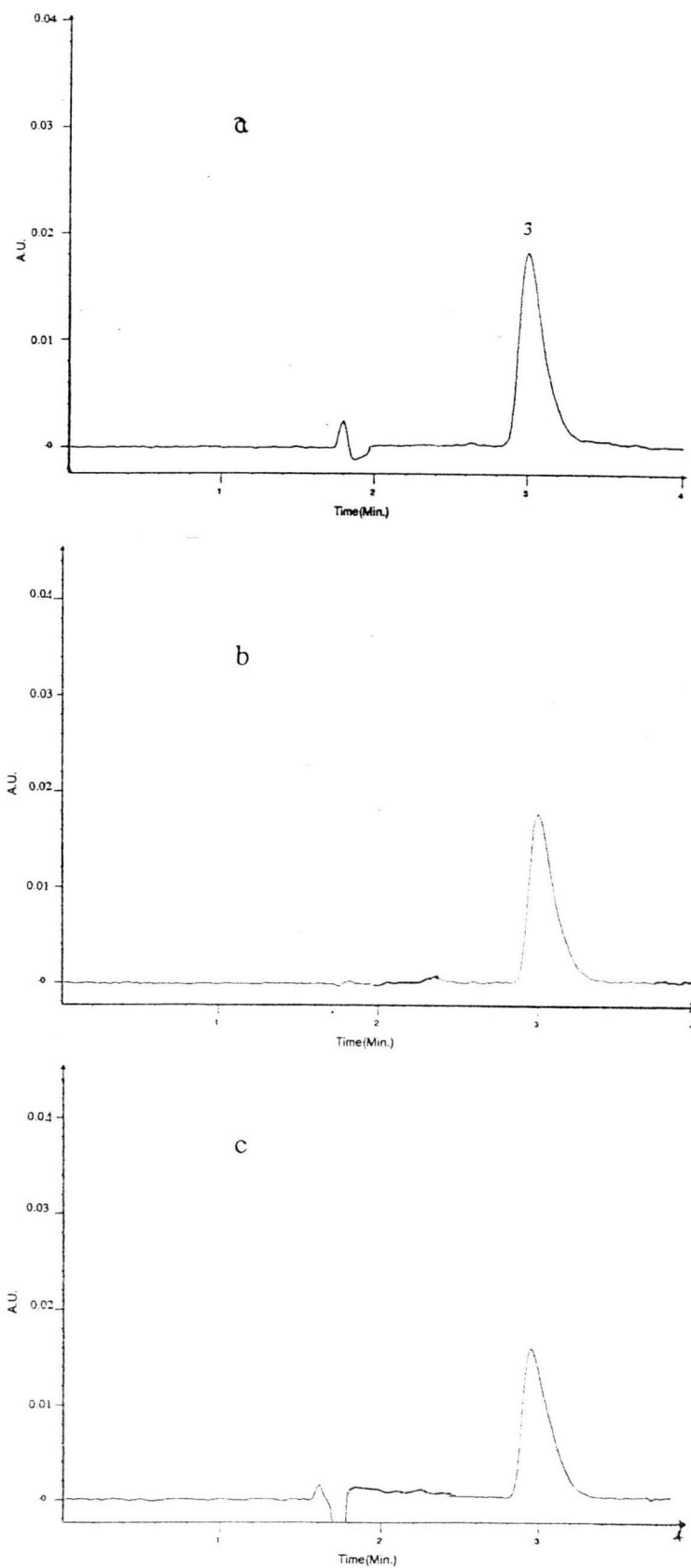


Figure H - 3 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in H - 1

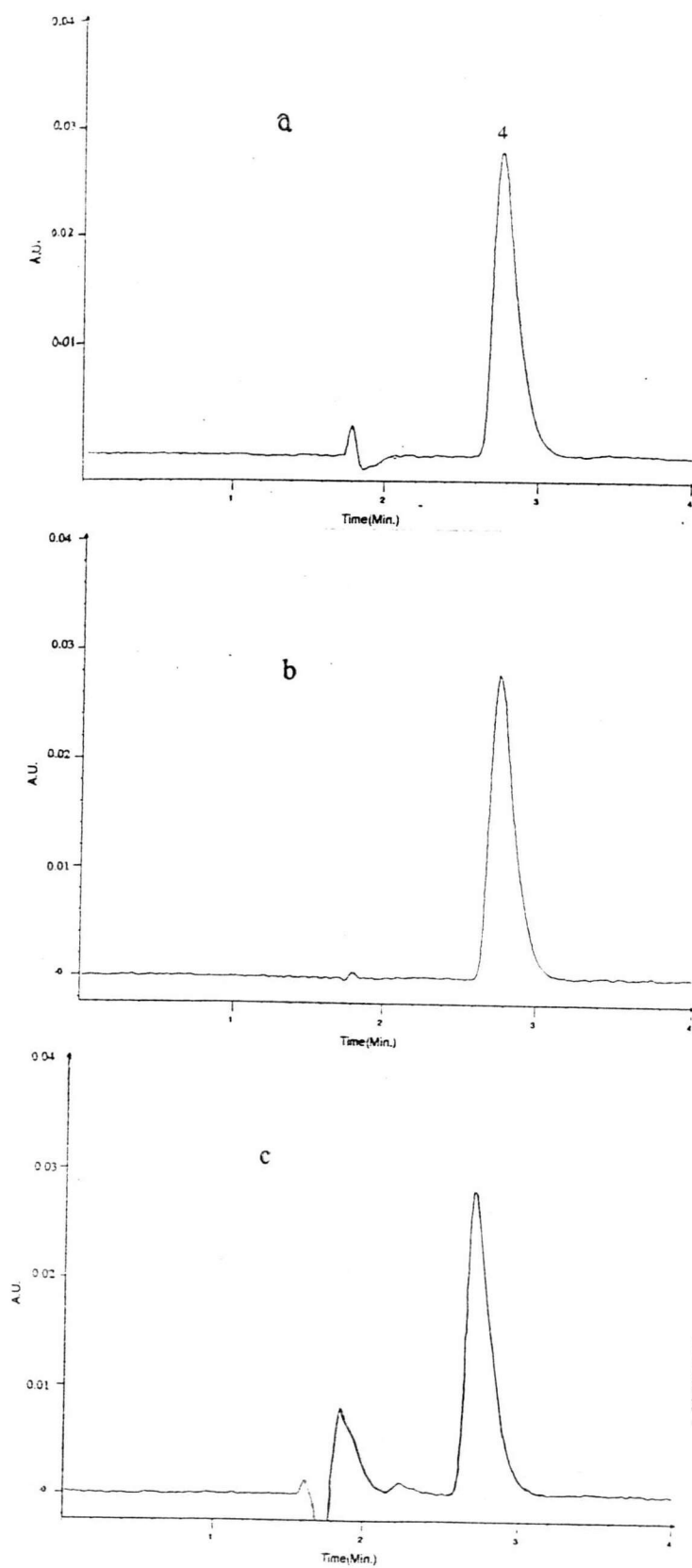


Figure H - 4 Chromatogram of standard acetylsalicylic acid (4).
Chromatographic conditions as given in H - 1

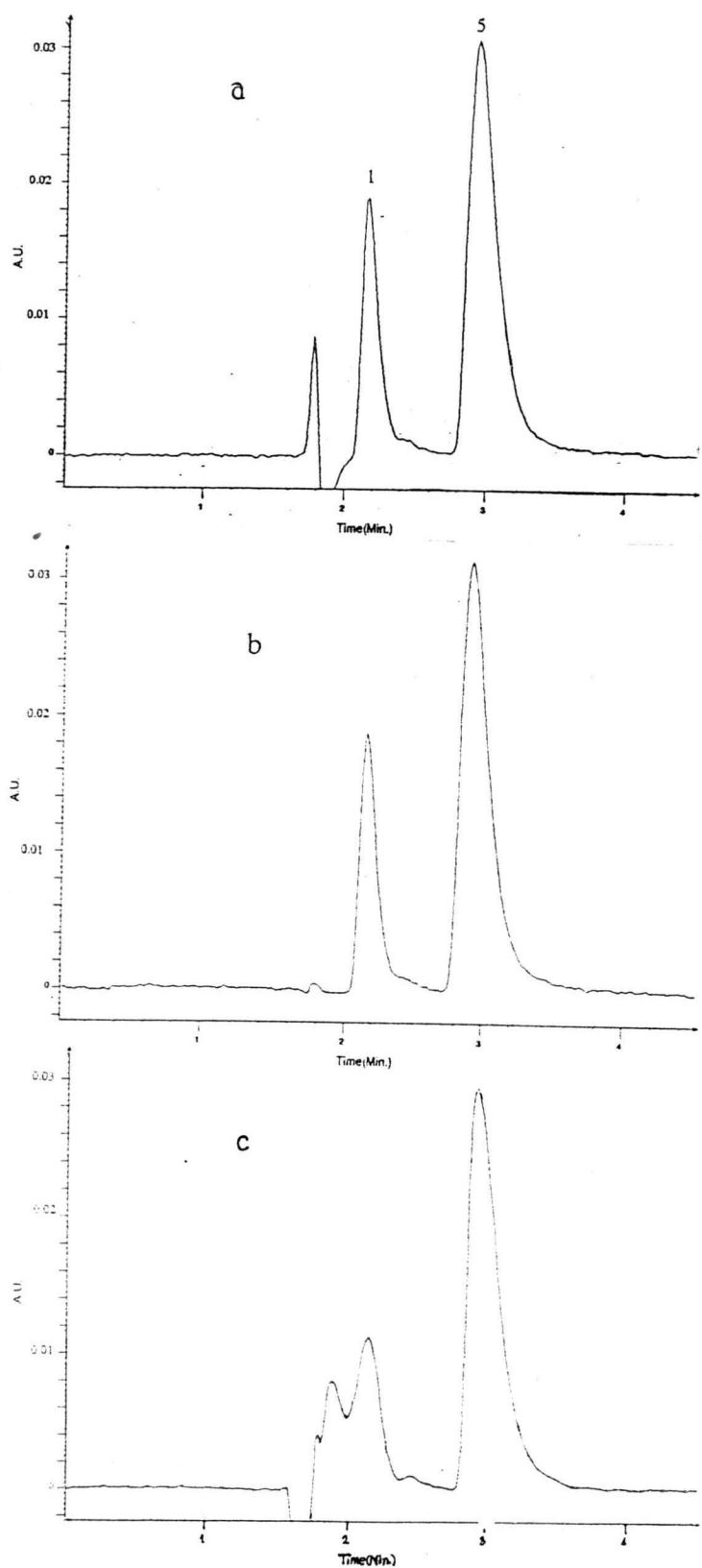


Figure H - 5 Chromatograms of standard mixtures of phenol (1) and salicylic acid (5) at pH 6.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

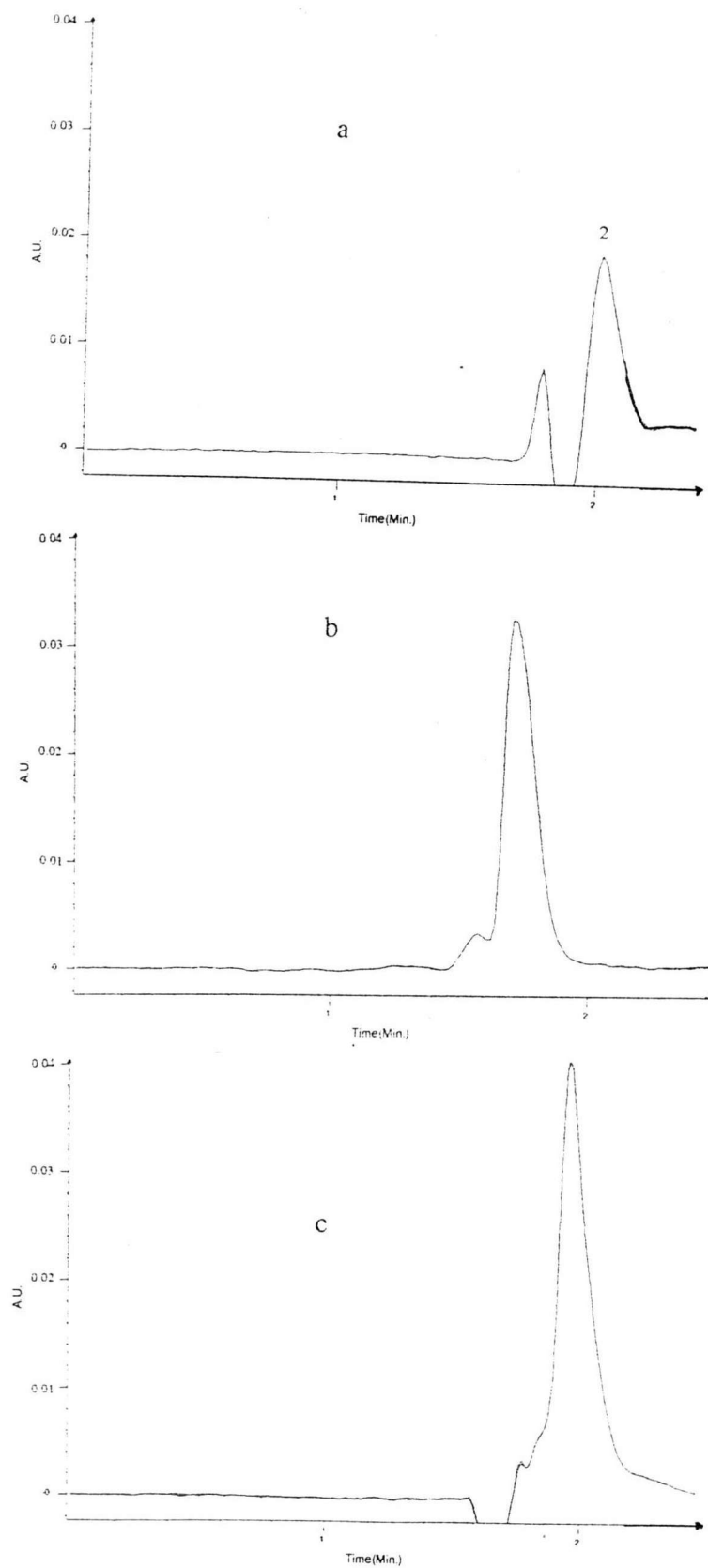


Figure H - 6 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in H - 5

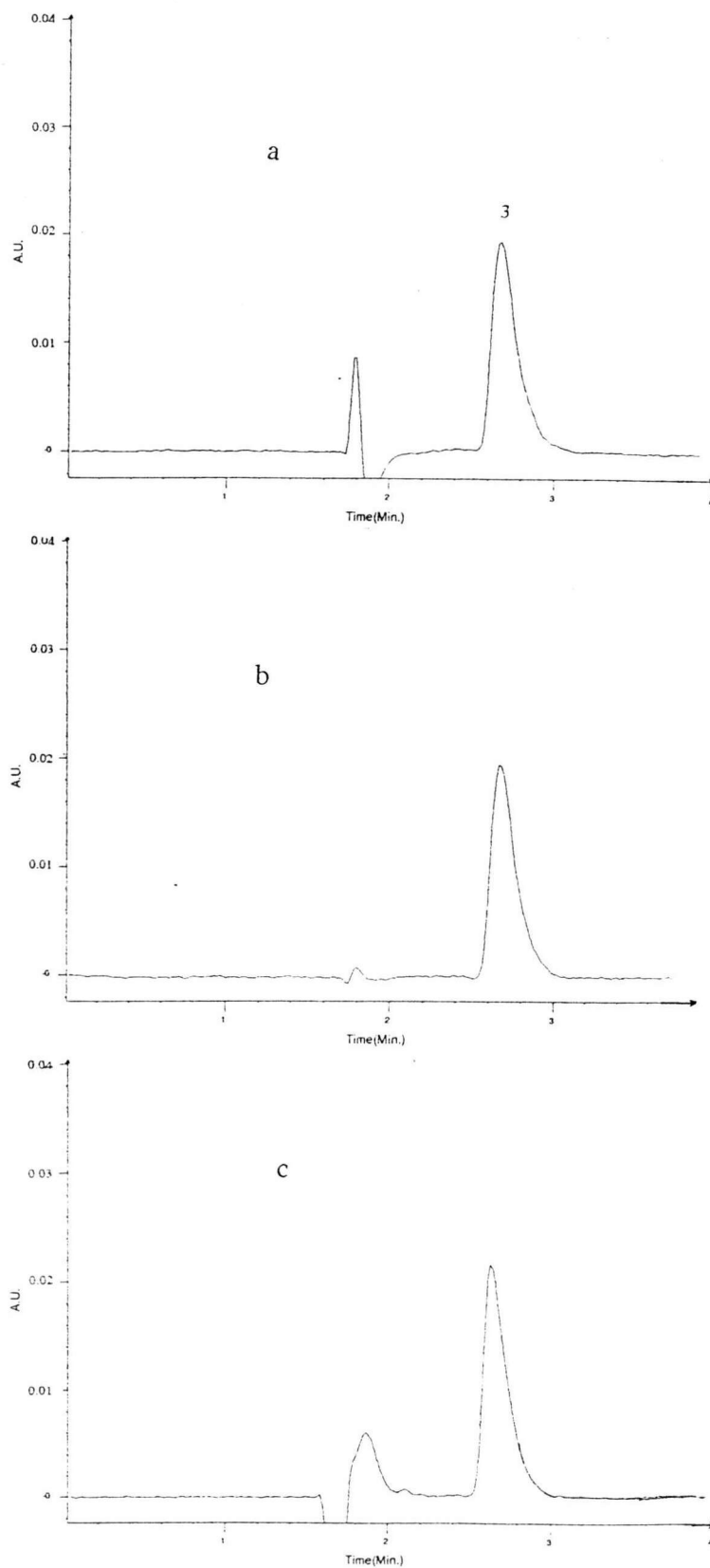


Figure H - 7 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in H - 5

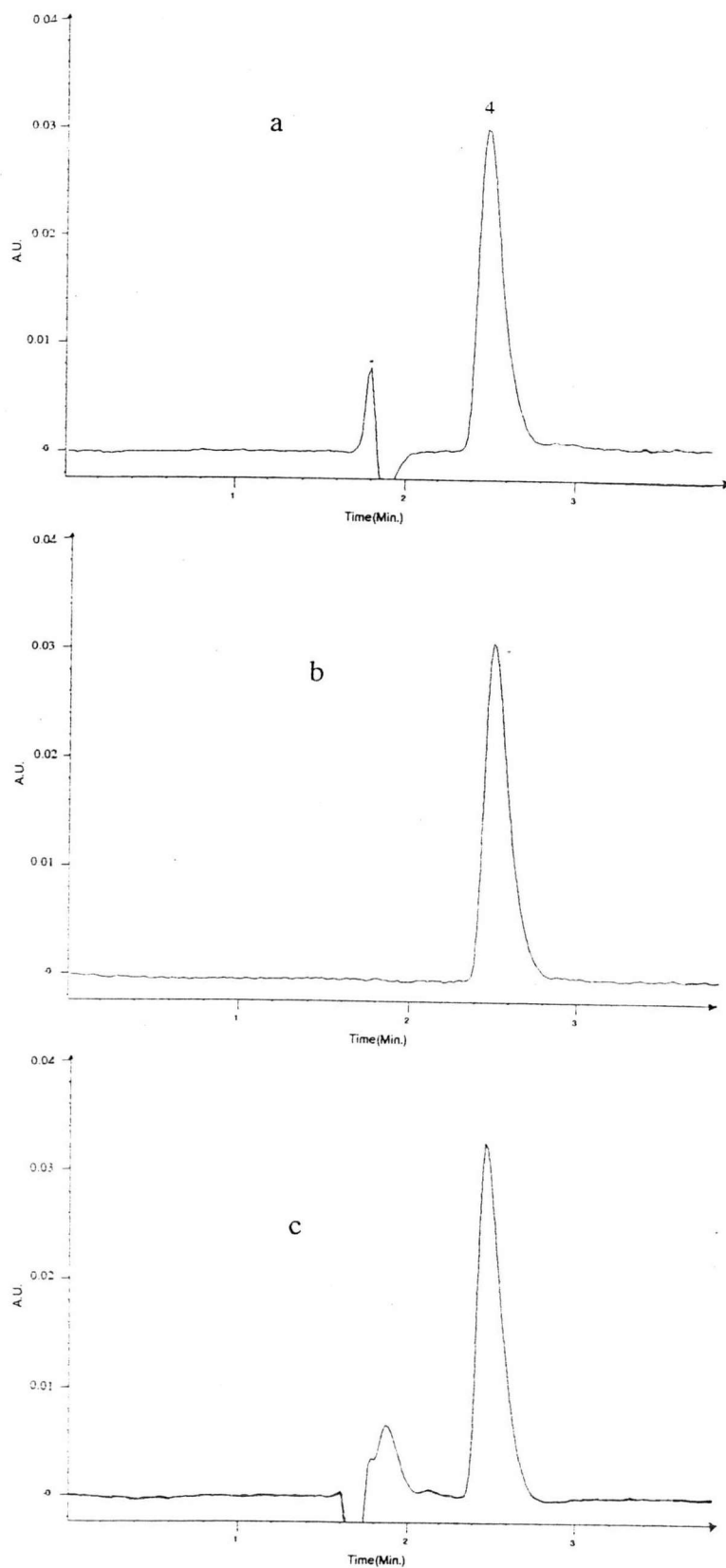


Figure H - 8 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in H - 5

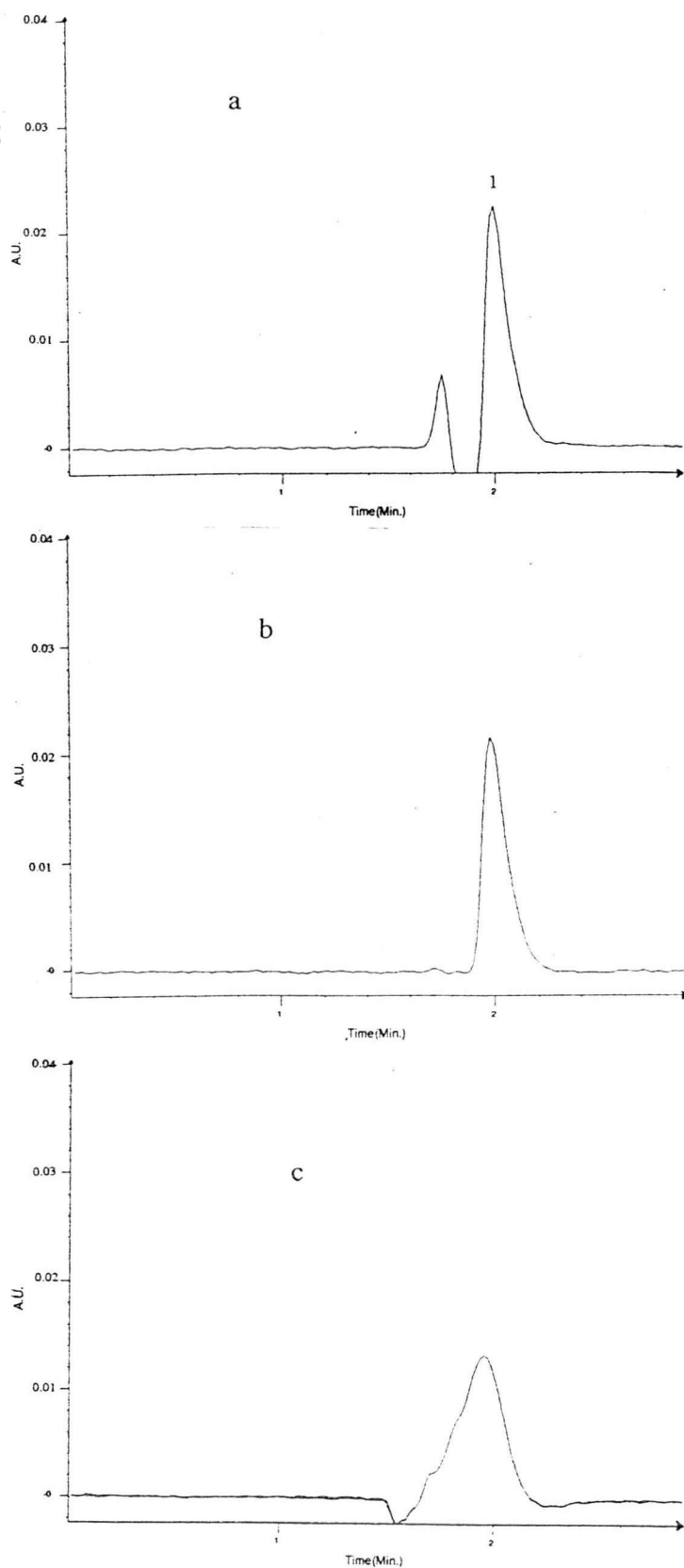


Figure H - 9 Chromatogram of standard phenol (1) at pH 6.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v); flow rate 1 ml/min. ; UV 254 nm.

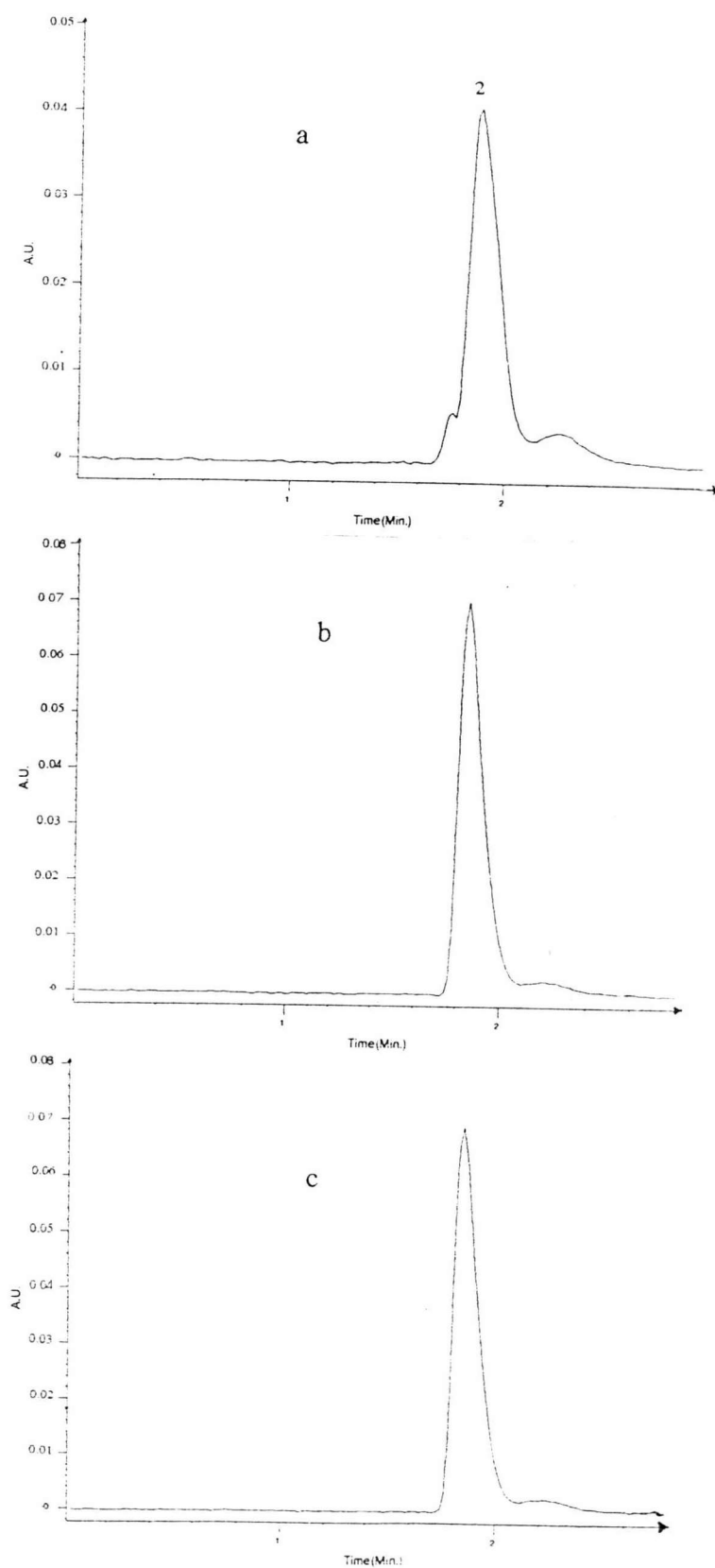


Figure H - 10 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in H - 9

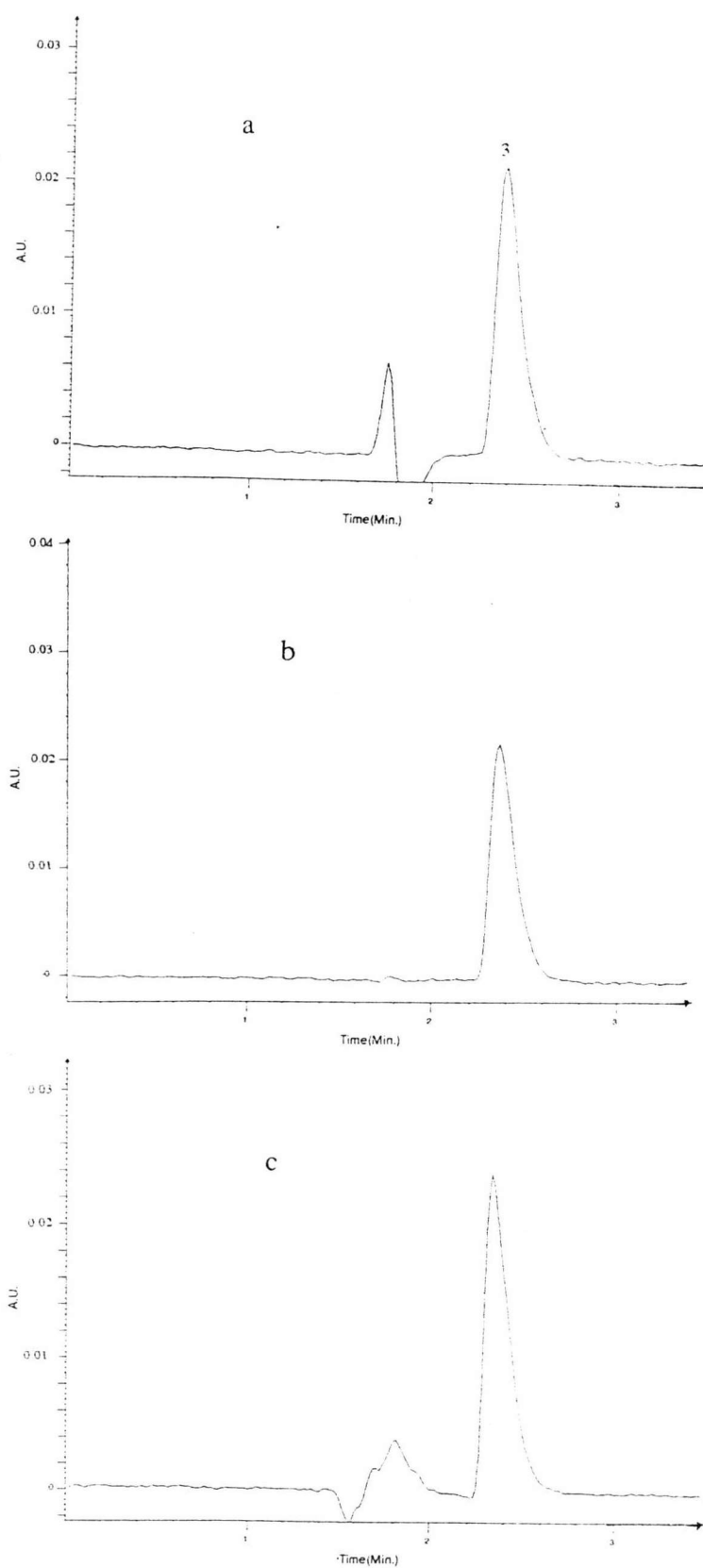


Figure H - 11 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in H - 9

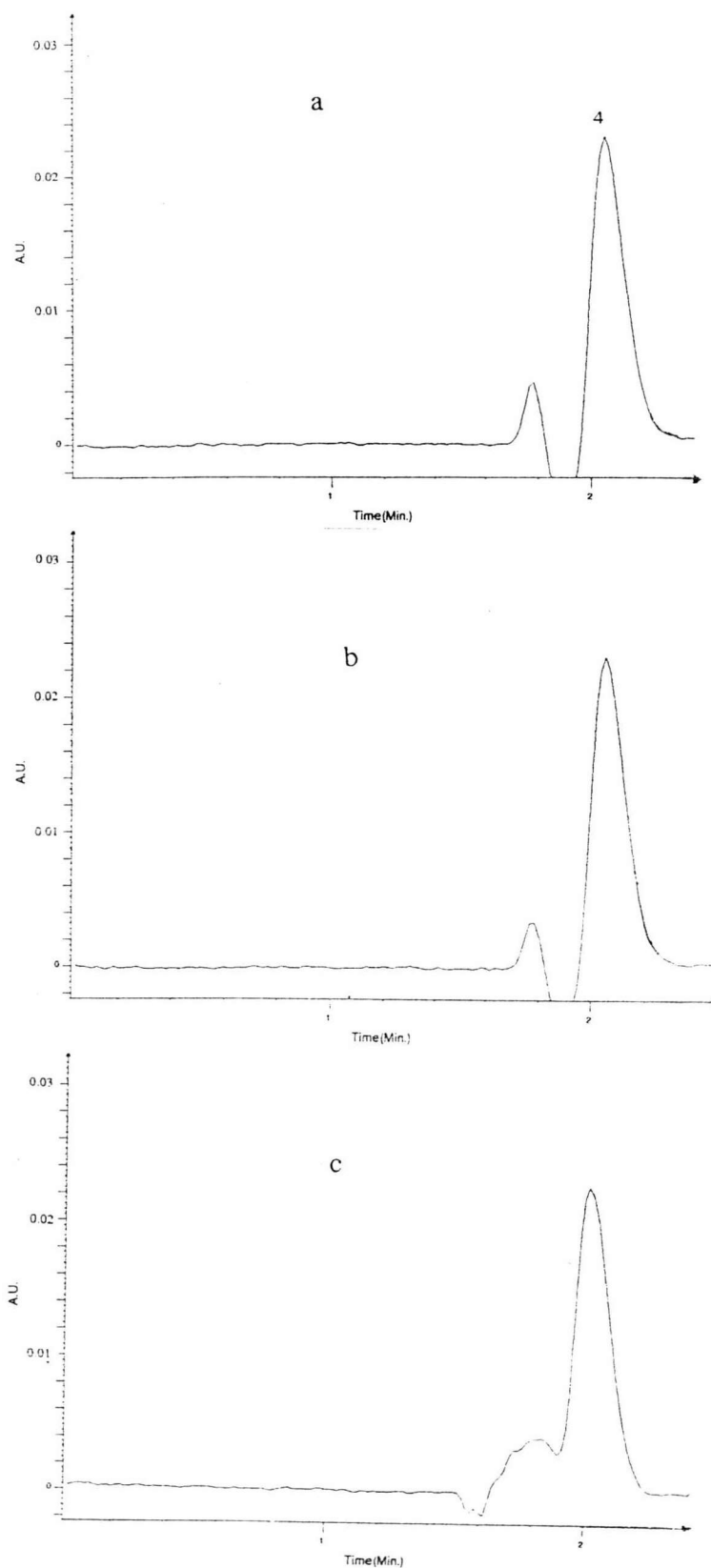


Figure H - 12 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in H - 9

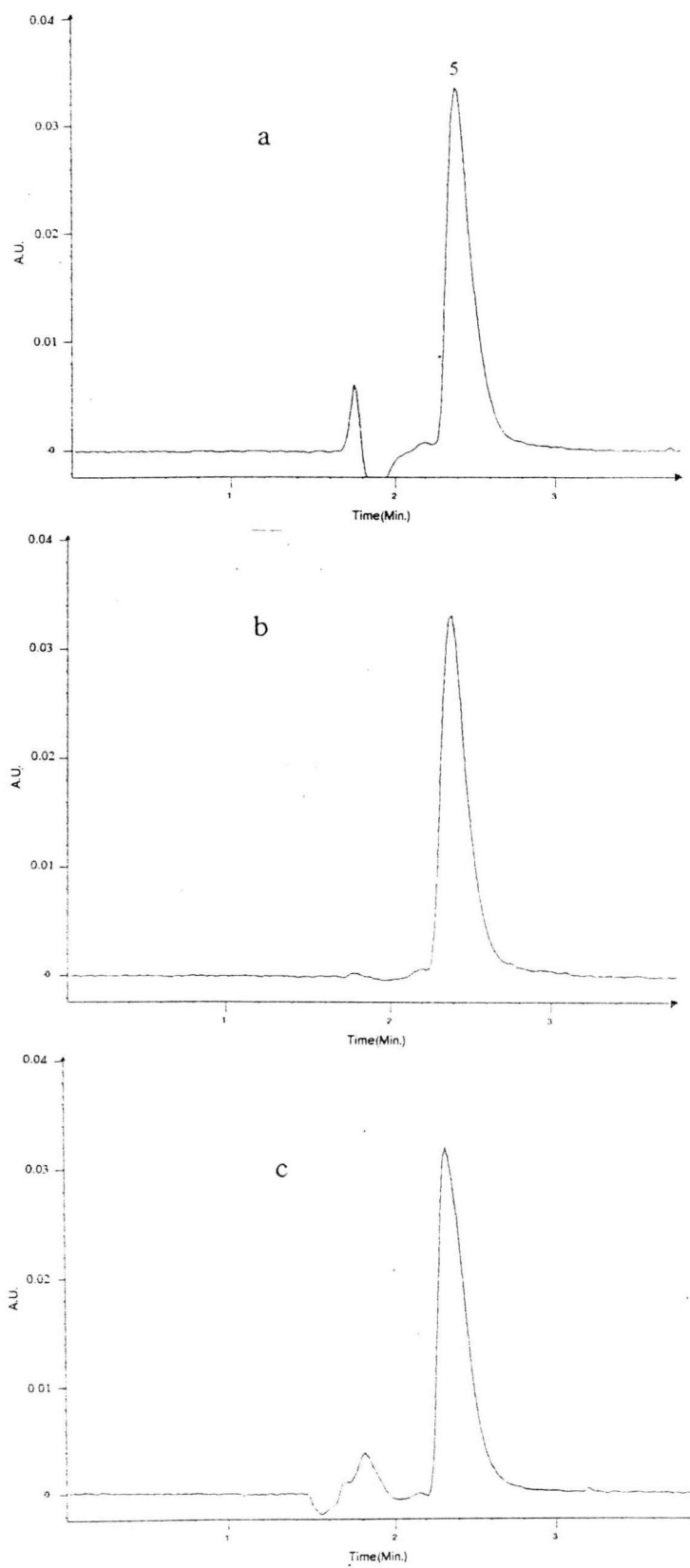


Figure H - 13 Chromatogram of standard salicylic acid (5) . Chromatographic conditions as given in H - 9

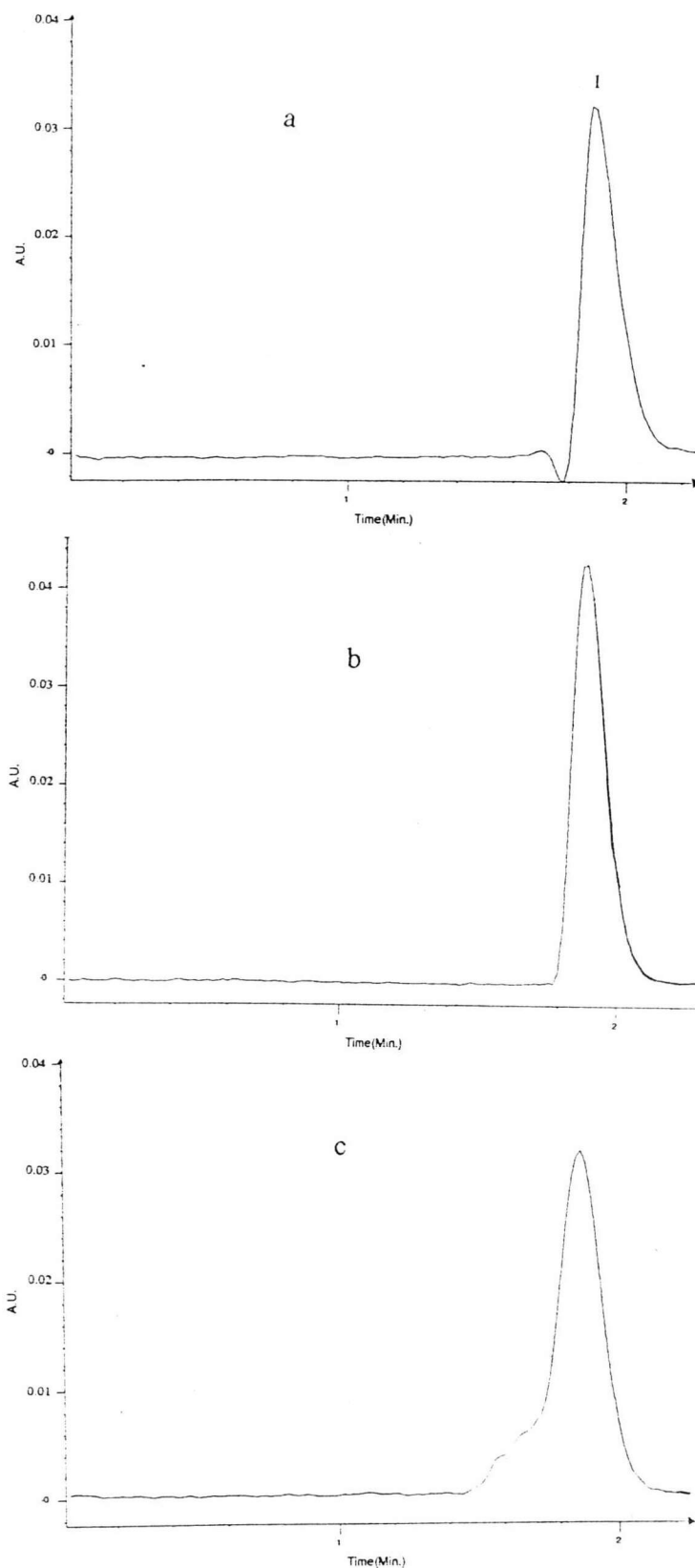


Figure H - 14 Chromatogram of standard phenol (1) at pH 6.0 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile(c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

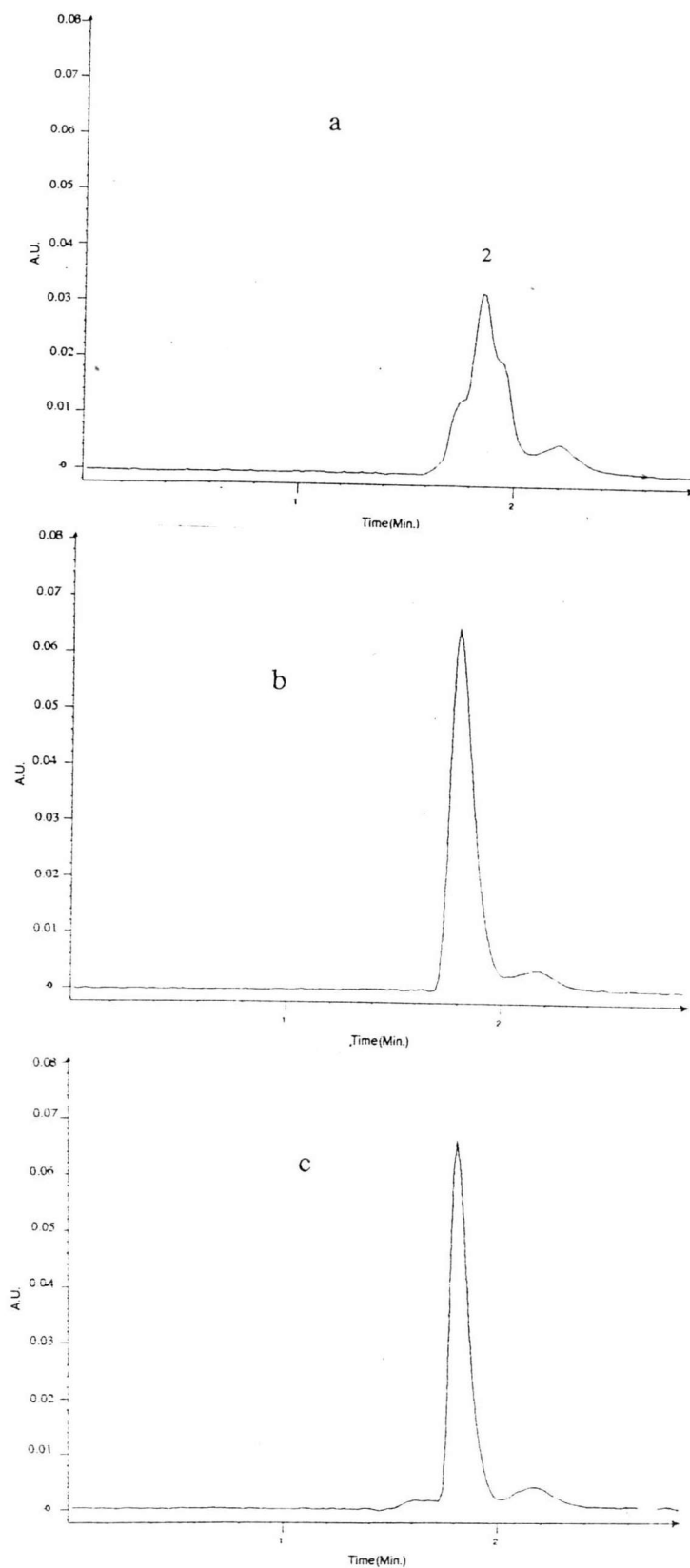


Figure H - 15 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in H - 14

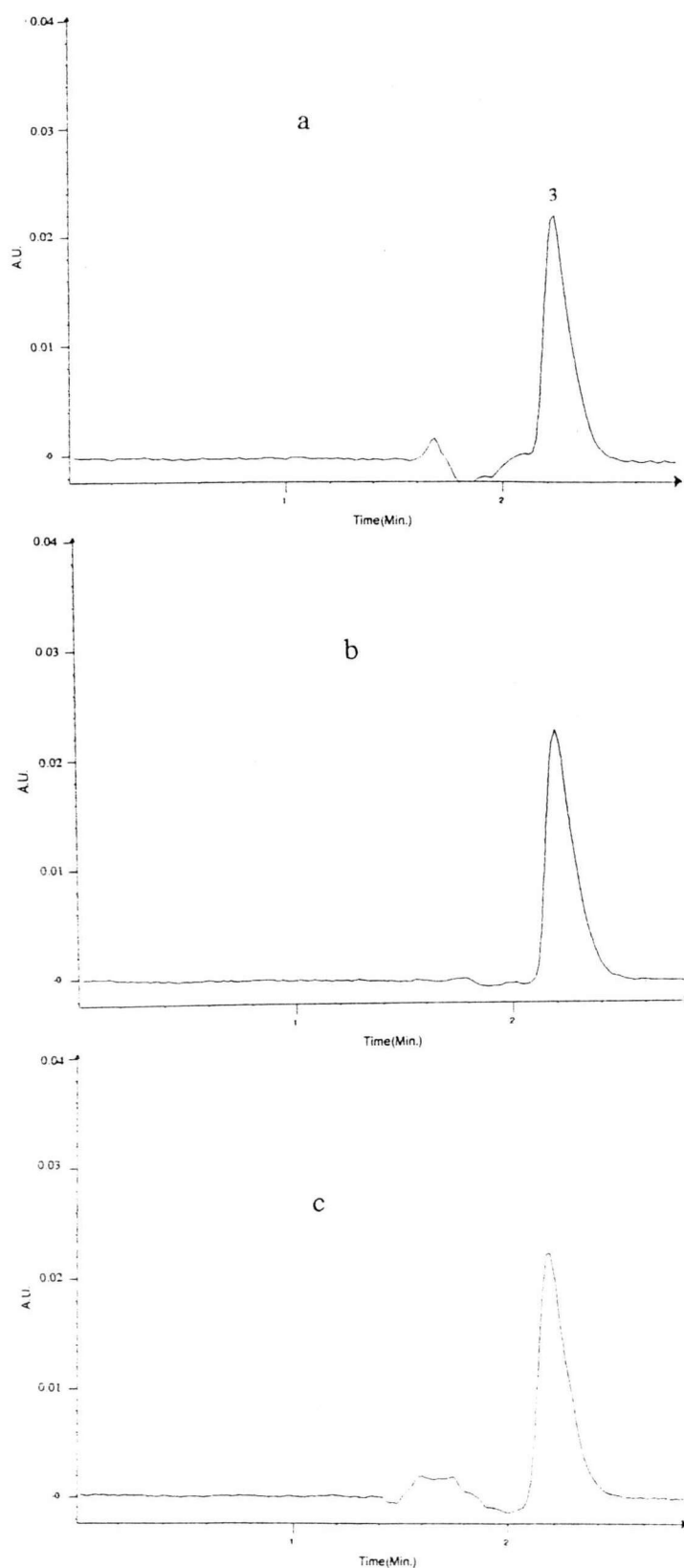


Figure H - 16 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in H - 14

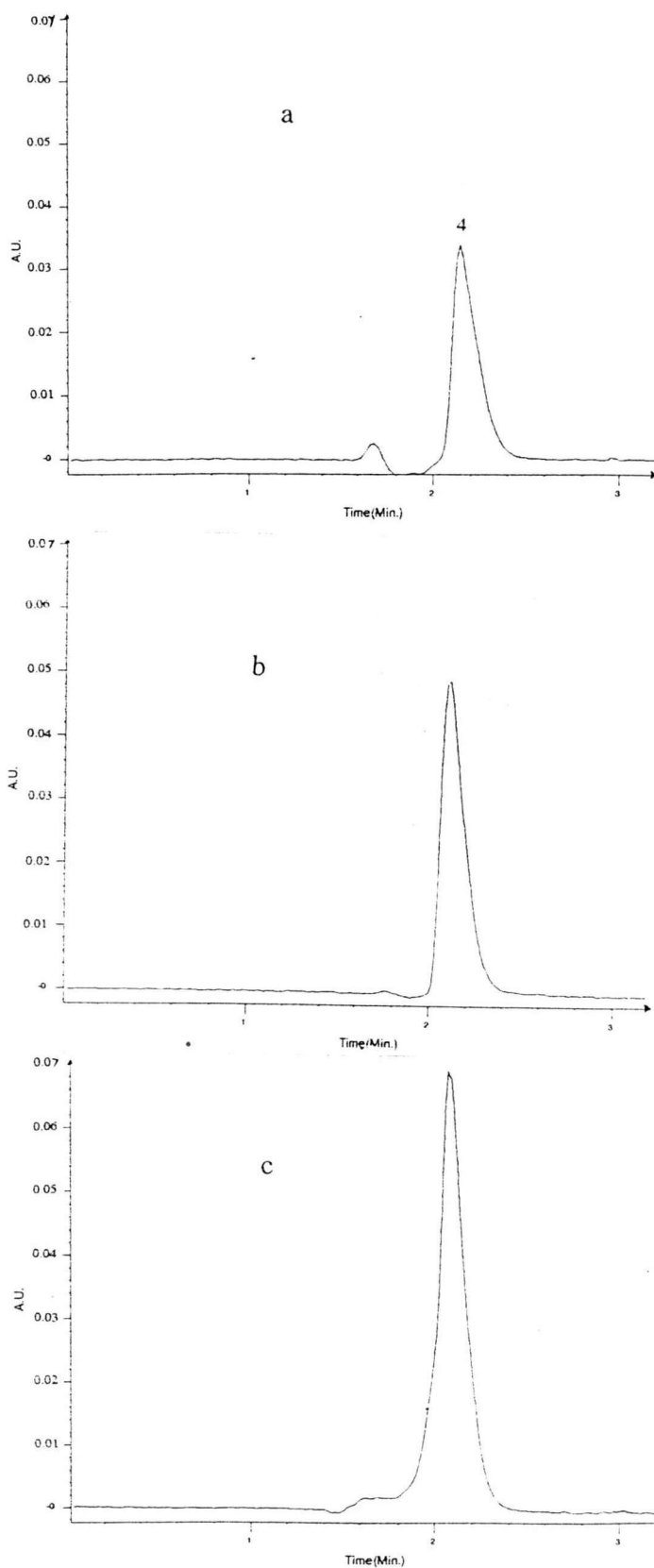


Figure H - 17 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in H - 14

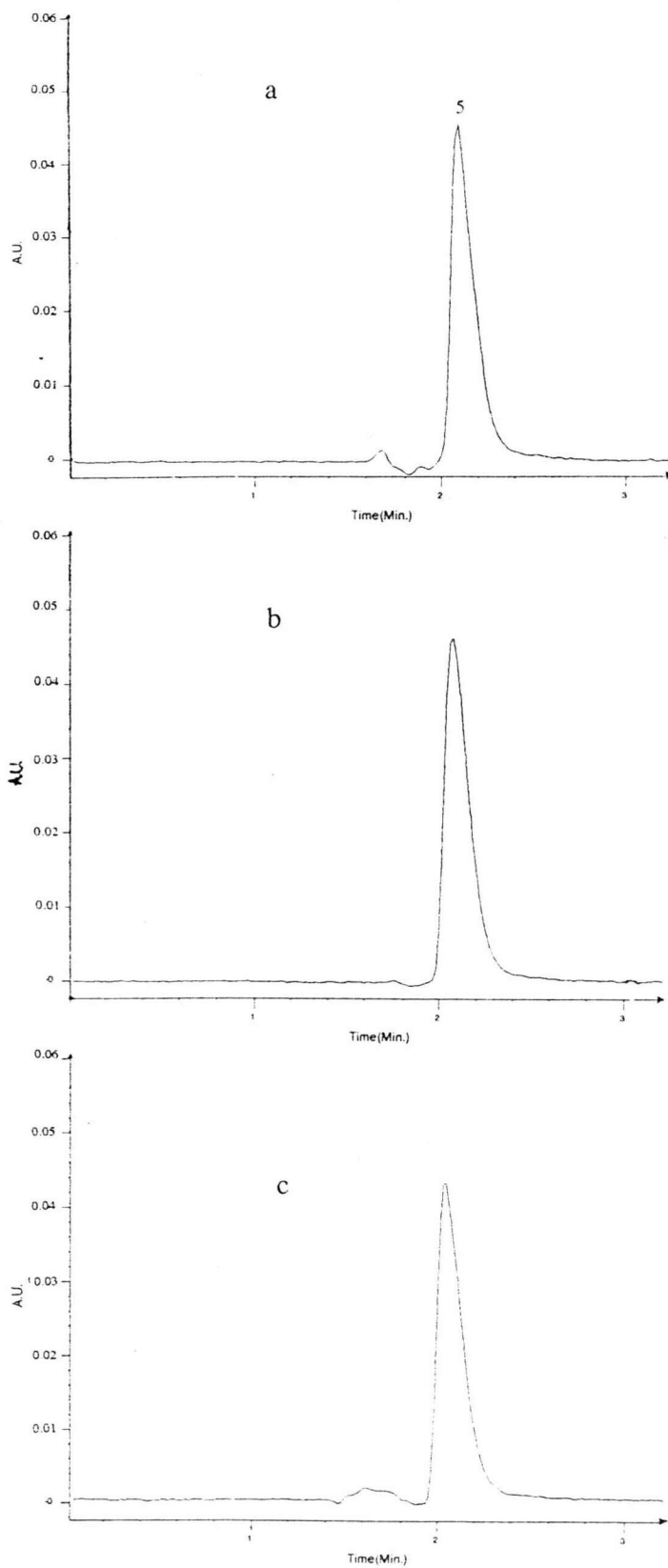


Figure H - 18 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in H - 14

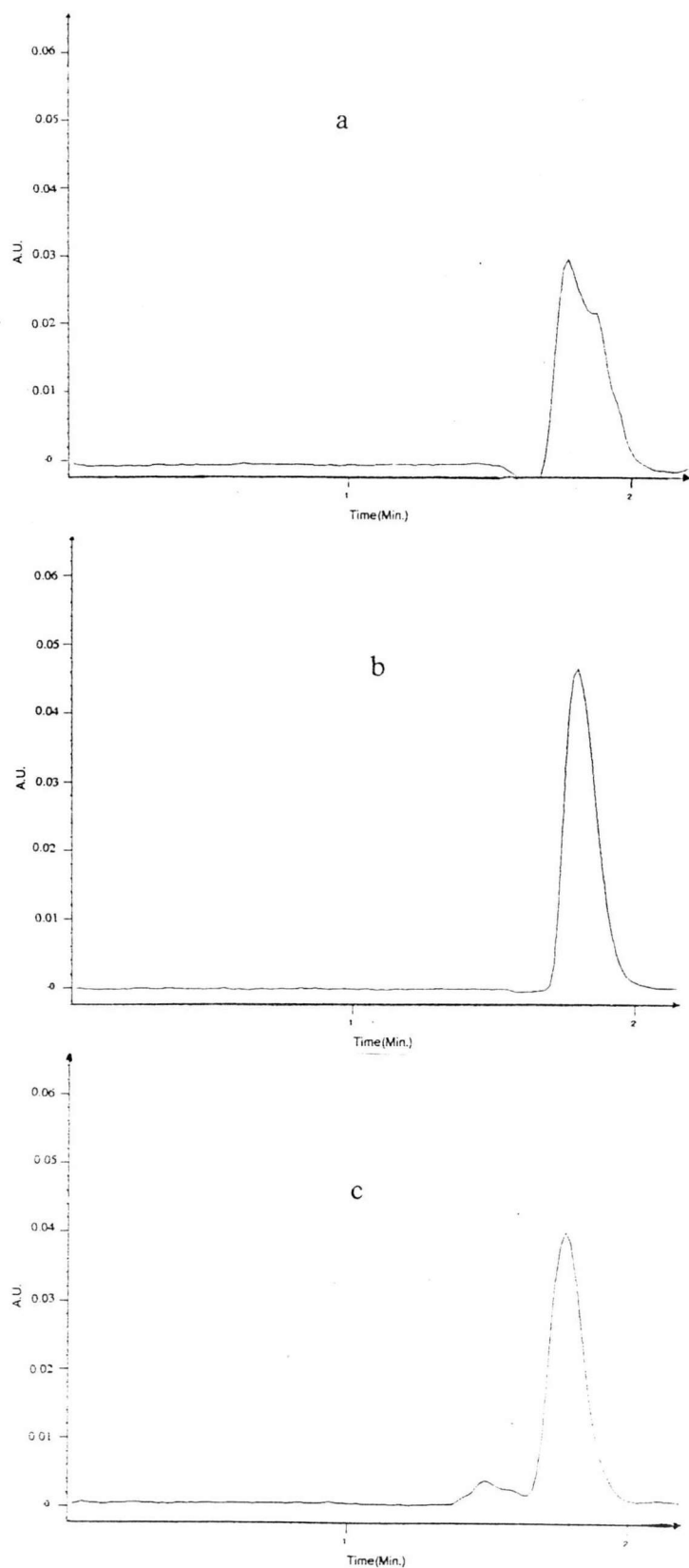


Figure H - 19 Chromatogram of standard phenol (1) at pH 6.0 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 50% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

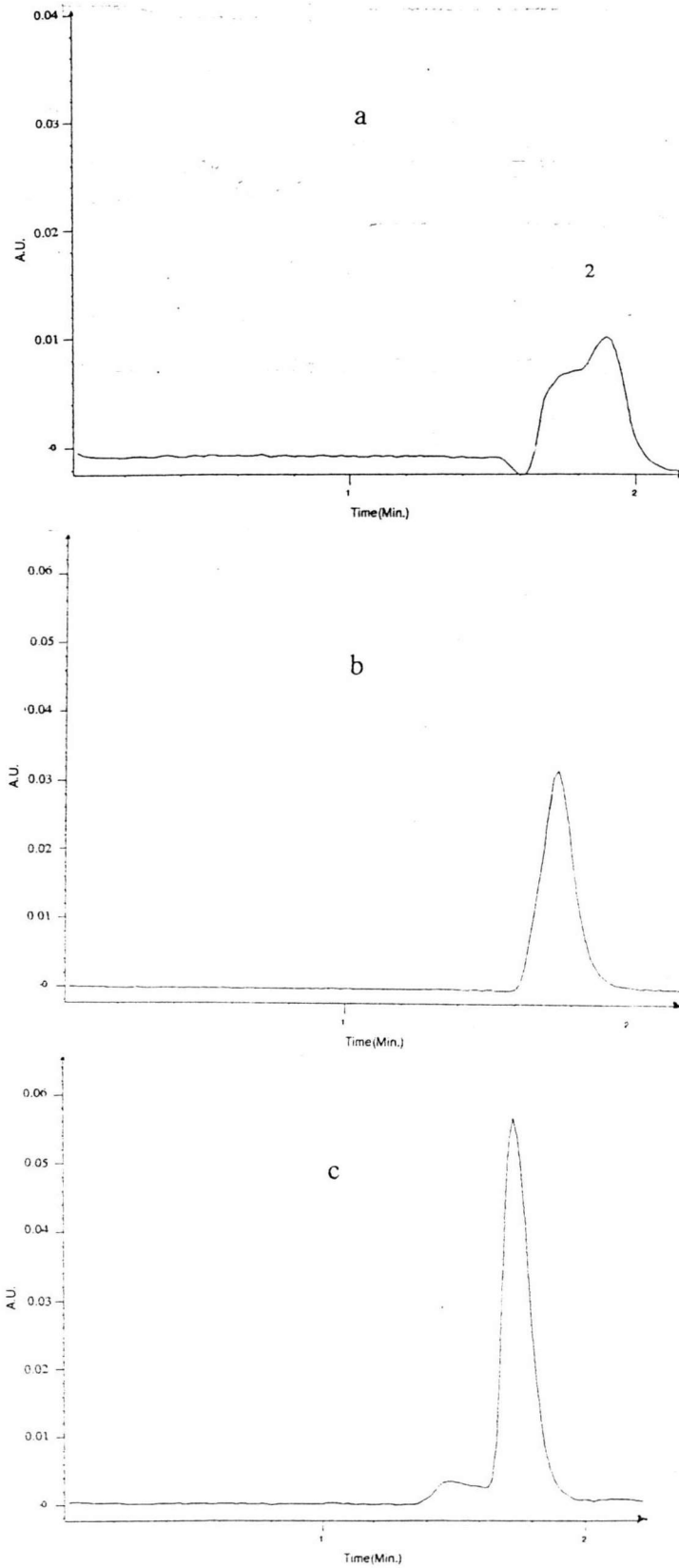


Figure H - 20 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in H - 19

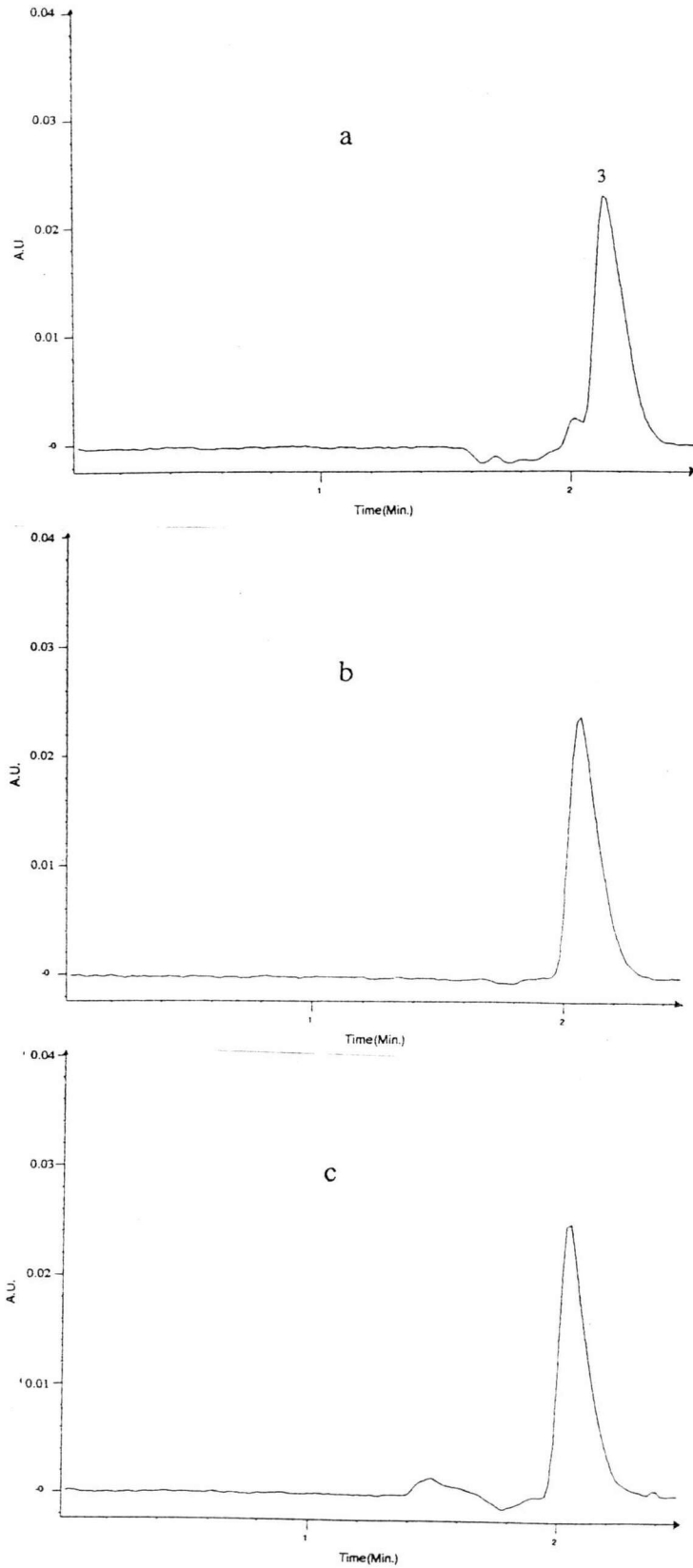


Figure H - 21 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in H - 19

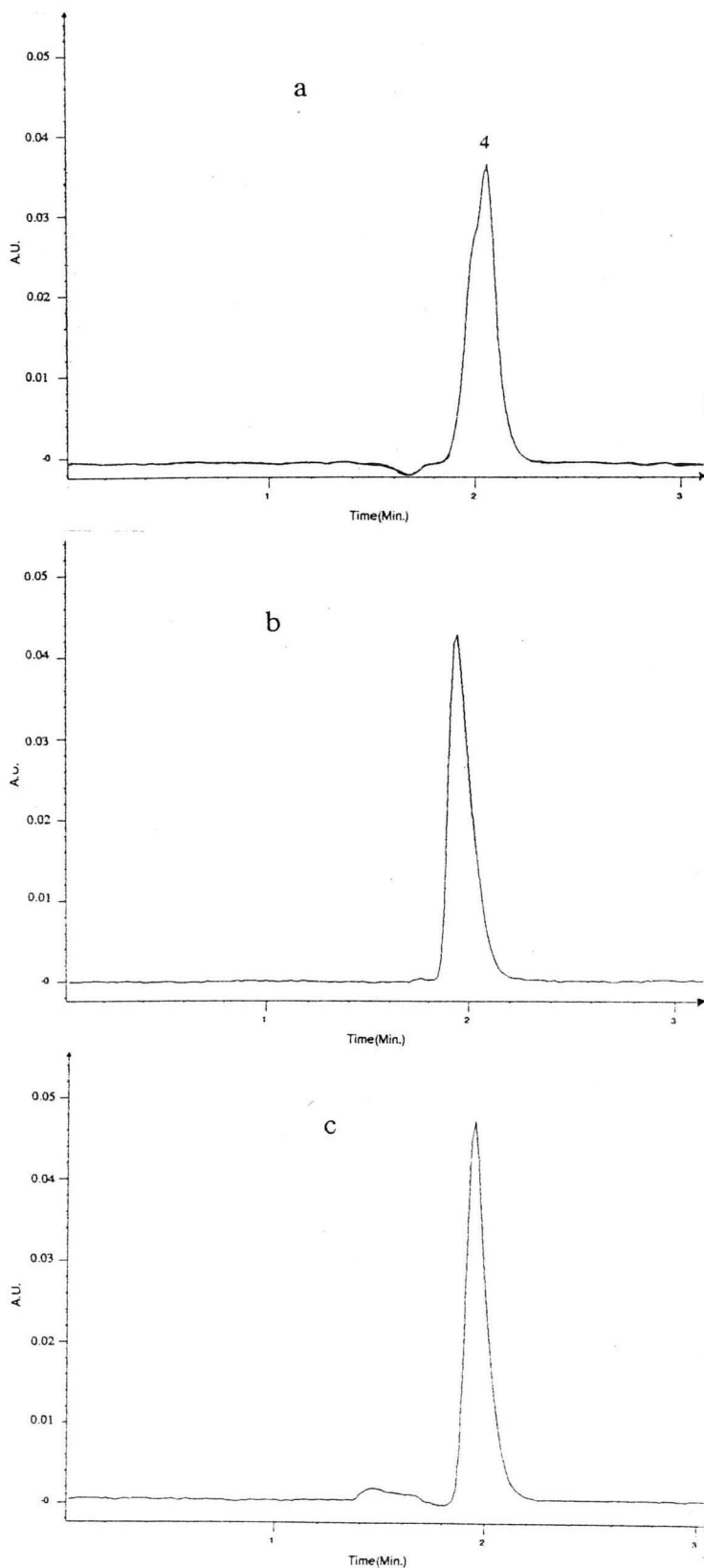


Figure H - 22 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in H - 19

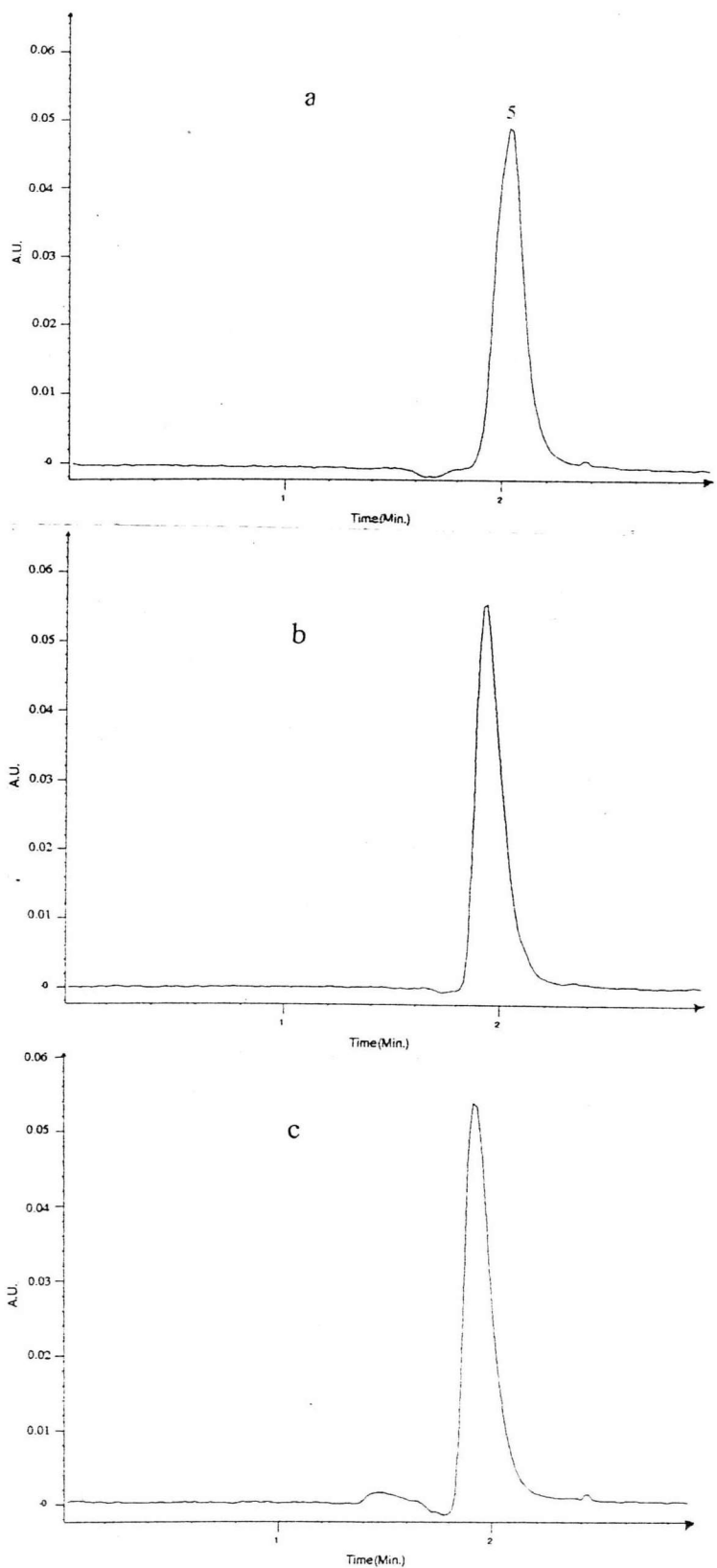


Figure H - 23 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in H - 19

APPENDIX I

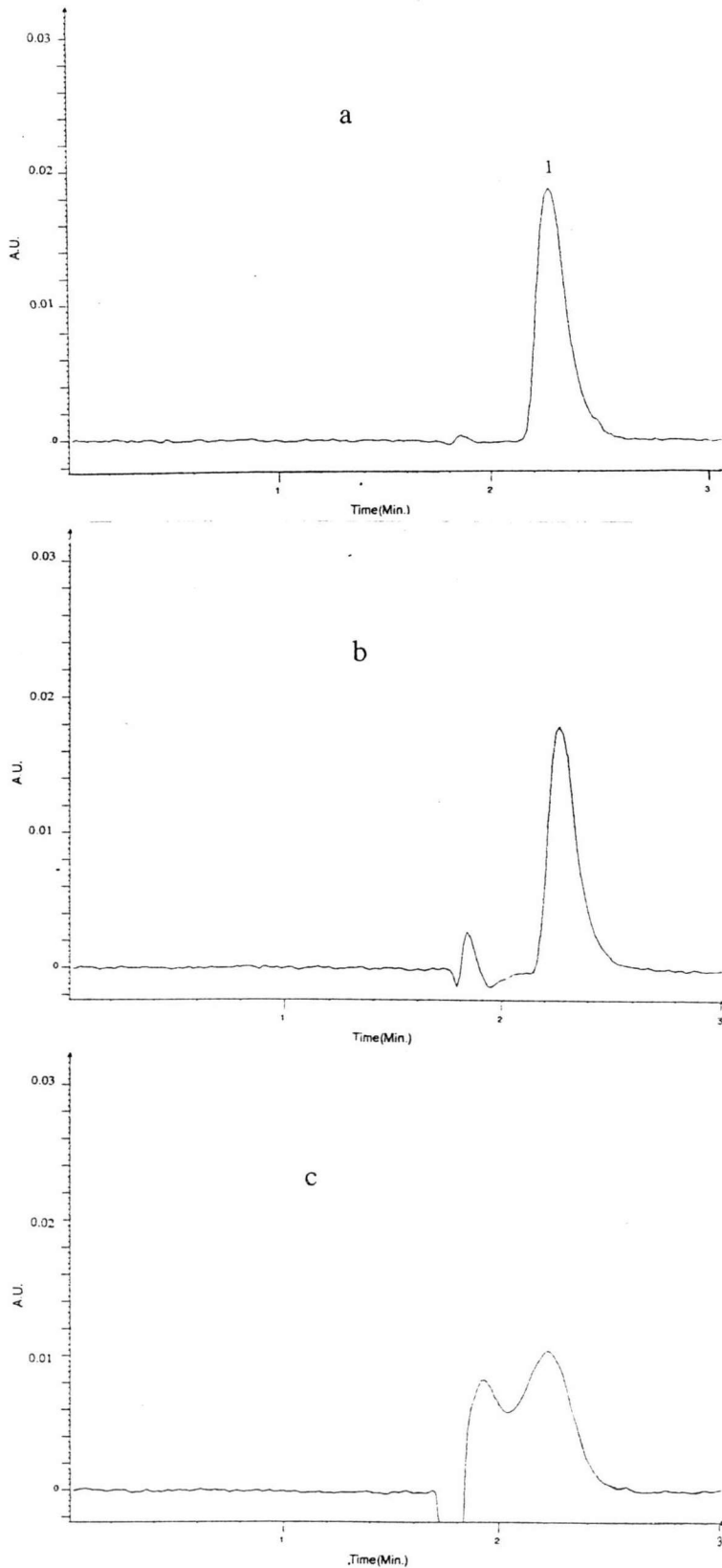


Figure I - 1 Chromatogram of standard phenol (1) at pH 6.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile(a), 10% (v/v) acetonitrile (b) ,70% (v/v) acetonitrile (c). Mobile Phase :acetonitrile / 30 mM phosphate buffer (10:90, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

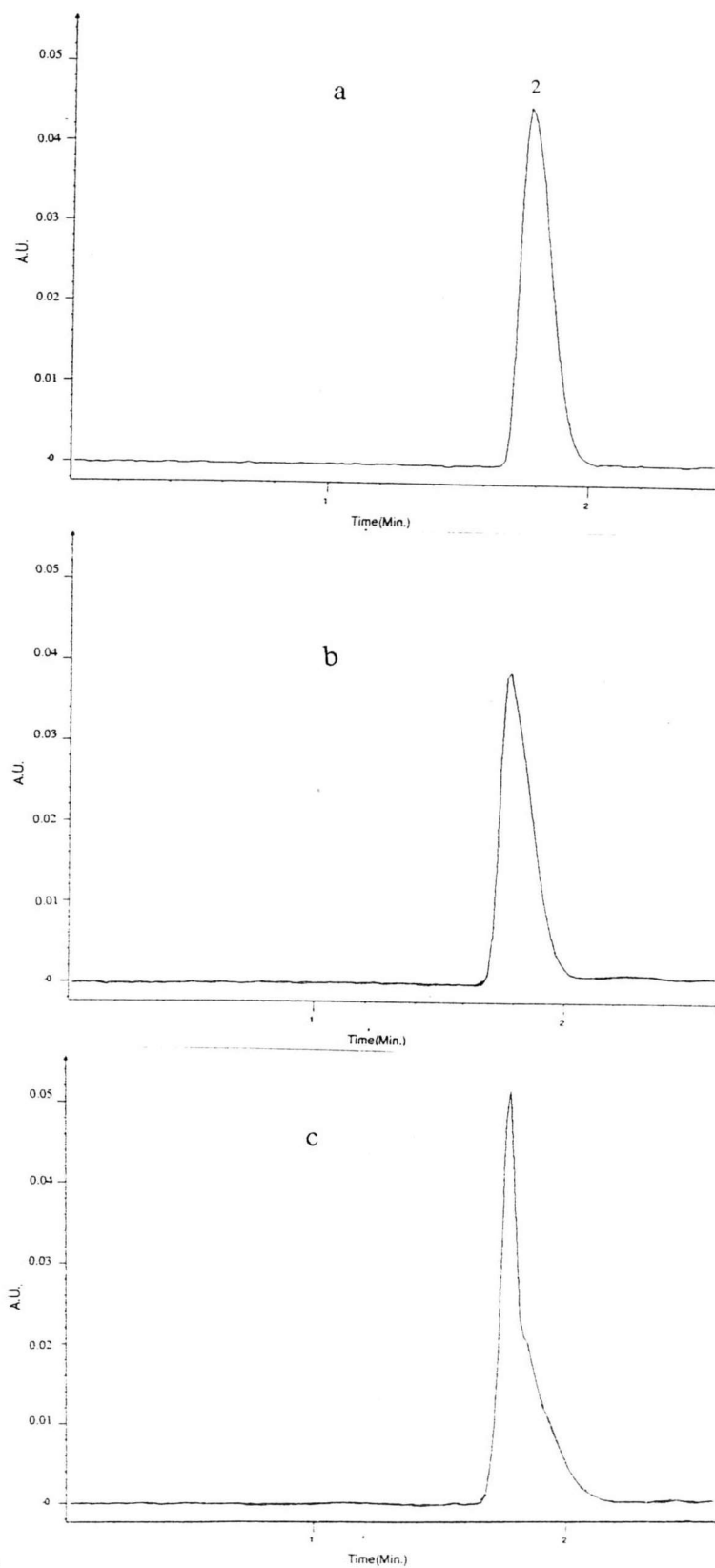


Figure I - 2 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in I - 1

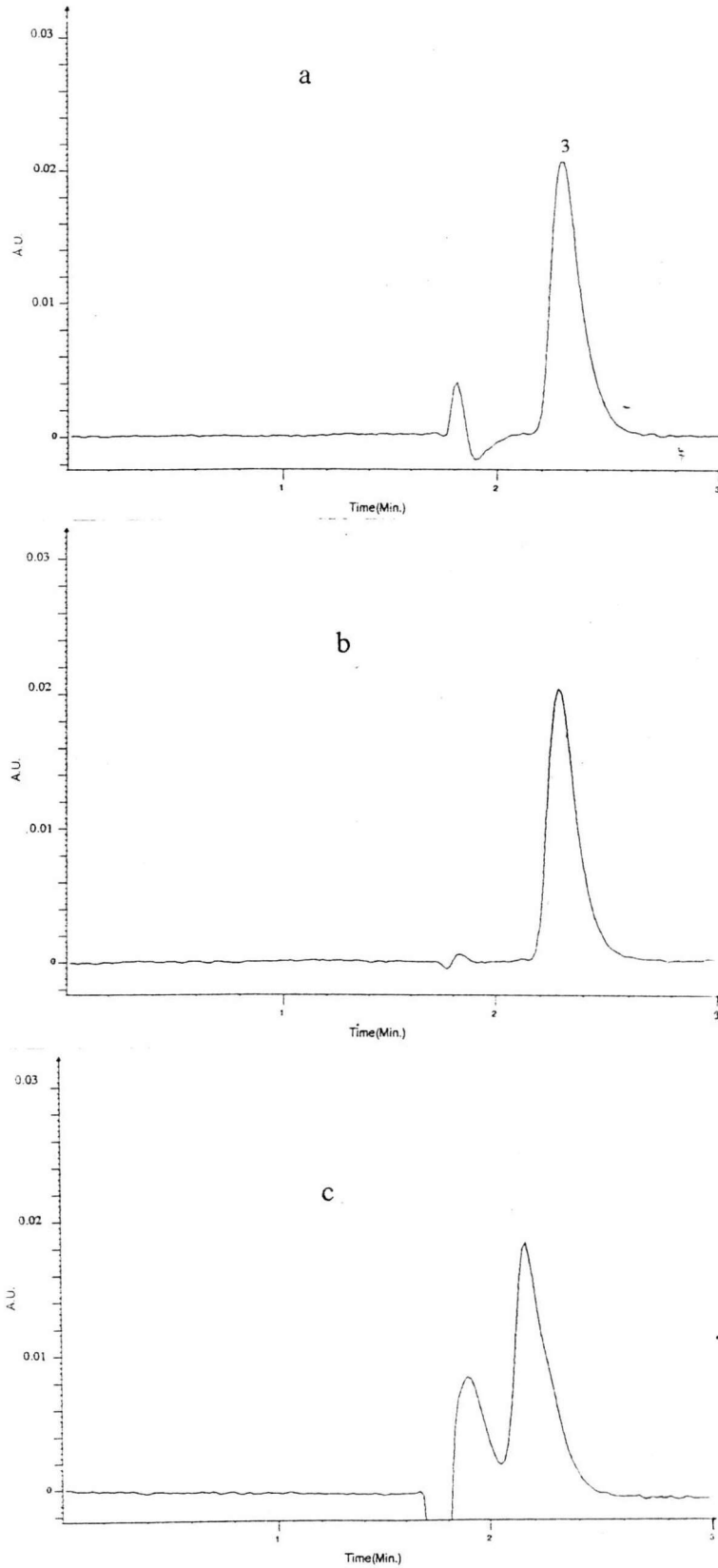


Figure I - 3 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in I - 1

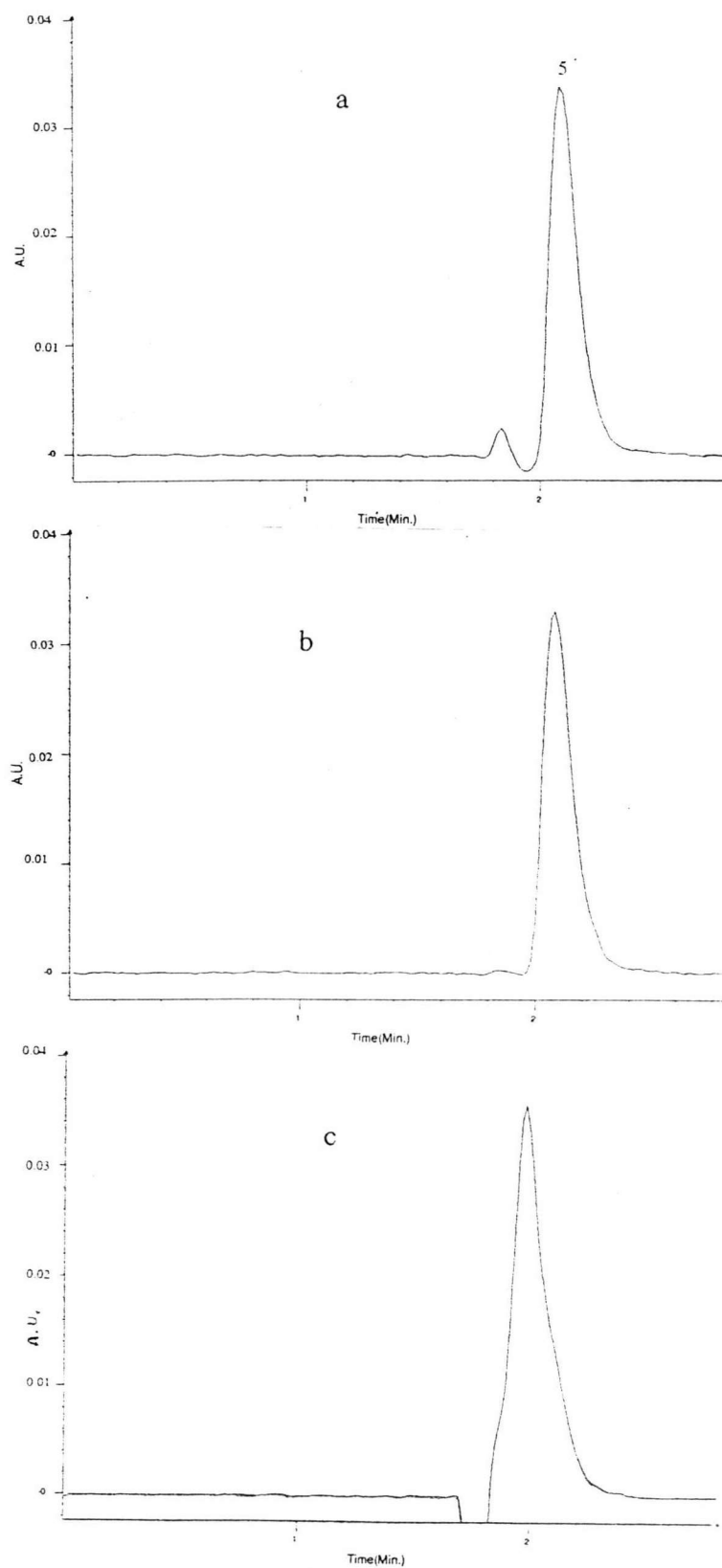


Figure I - 4 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in I - 1

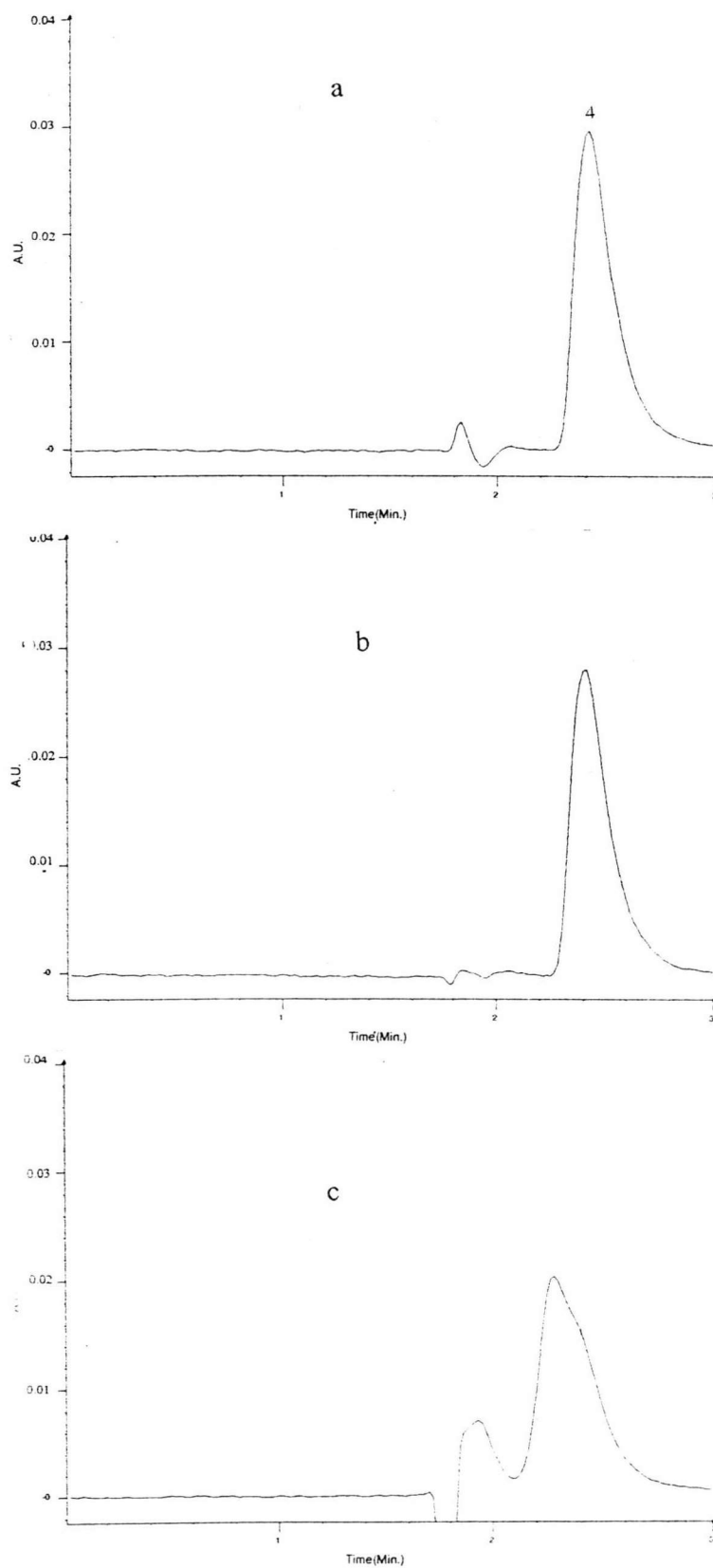


Figure I - 5 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in I - 1

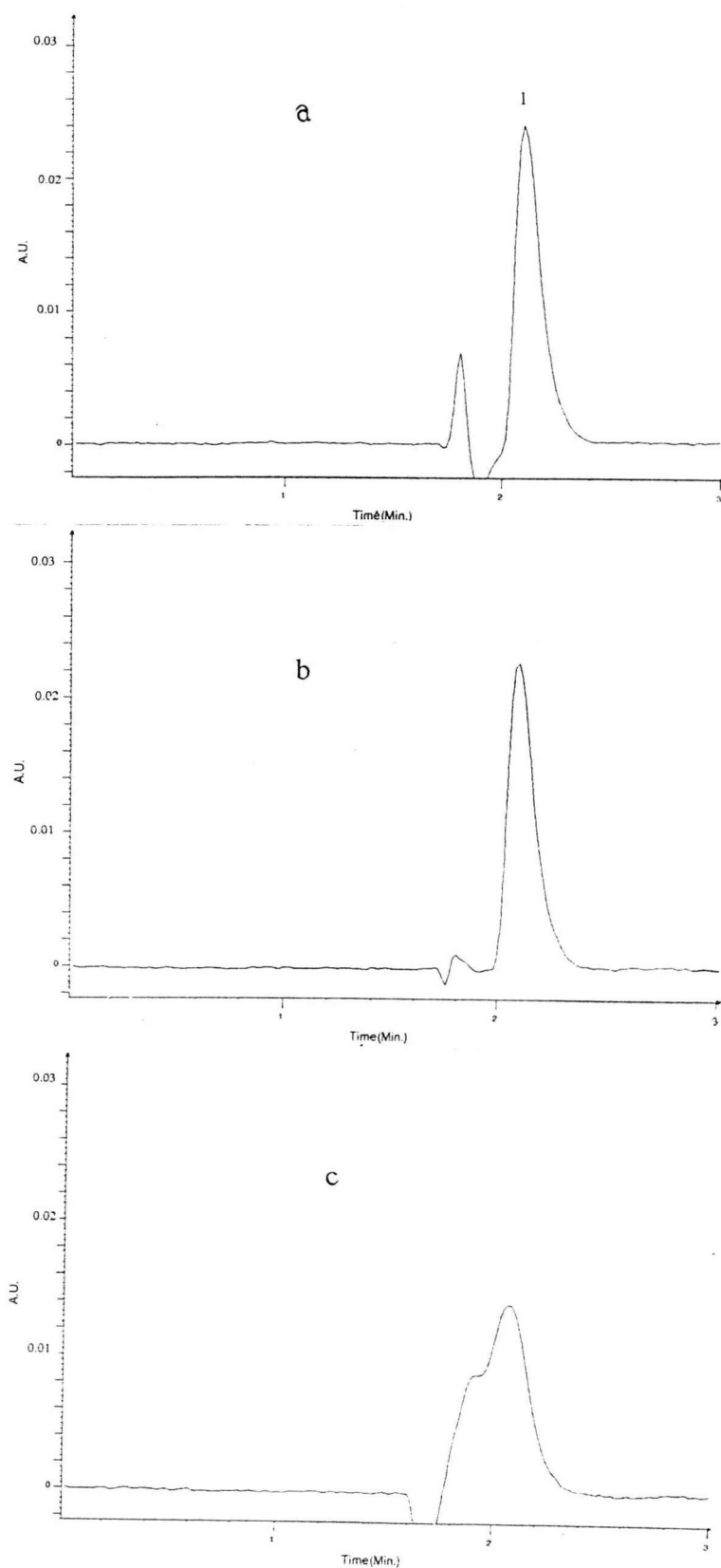


Figure I - 6 Chromatogram of standard phenol (1) at pH 6.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a) 20% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile /30 mM phosphate buffer (20:80, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

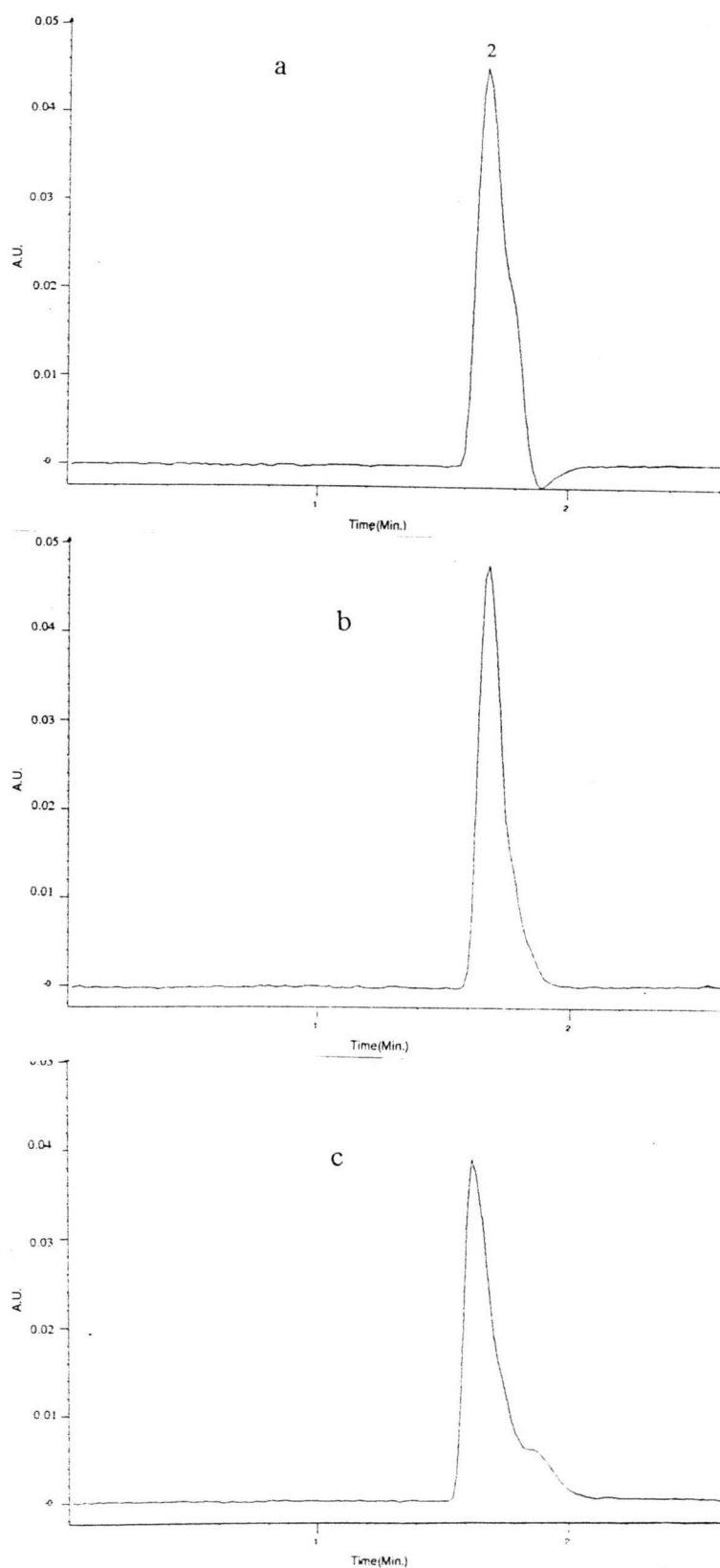


Figure I - 7 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in I - 6

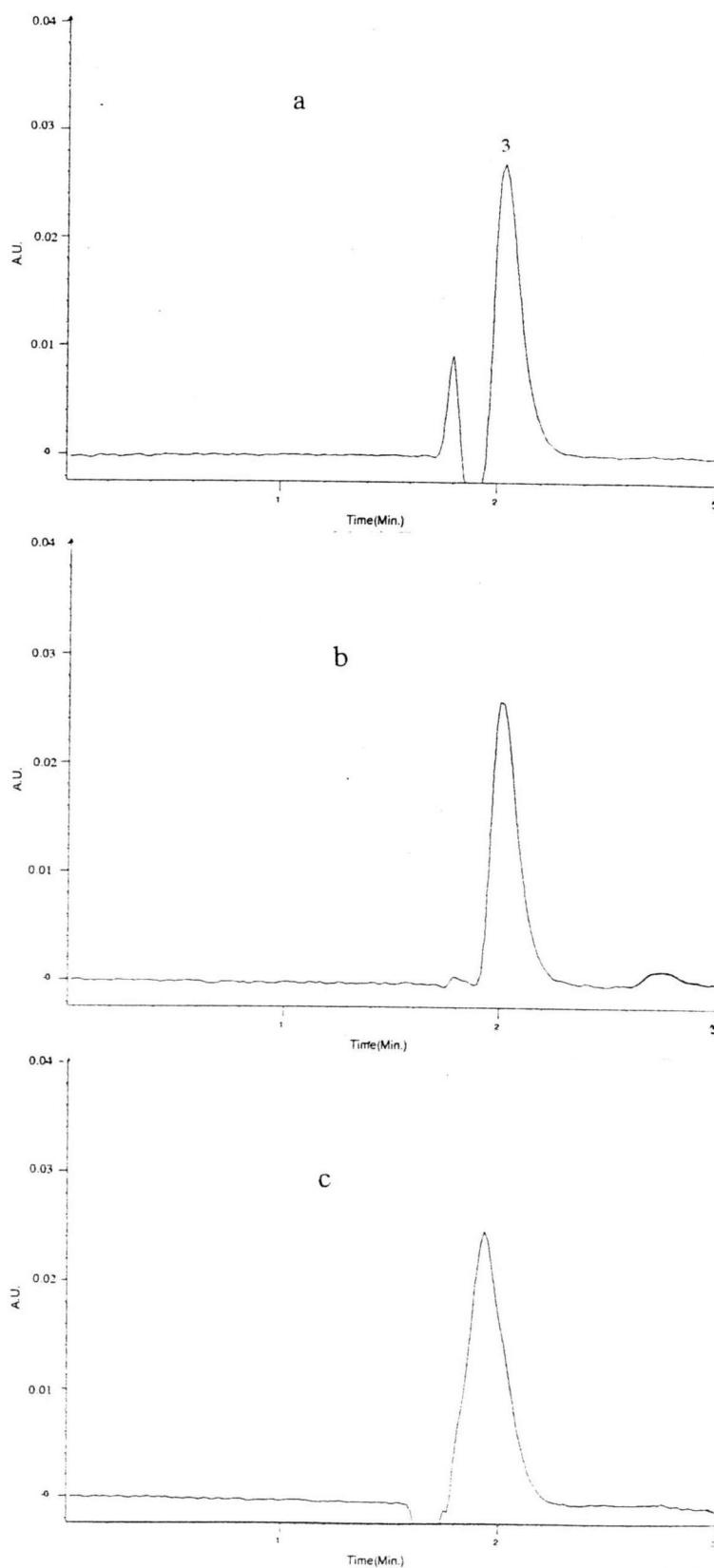


Figure I - 8 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in I - 6

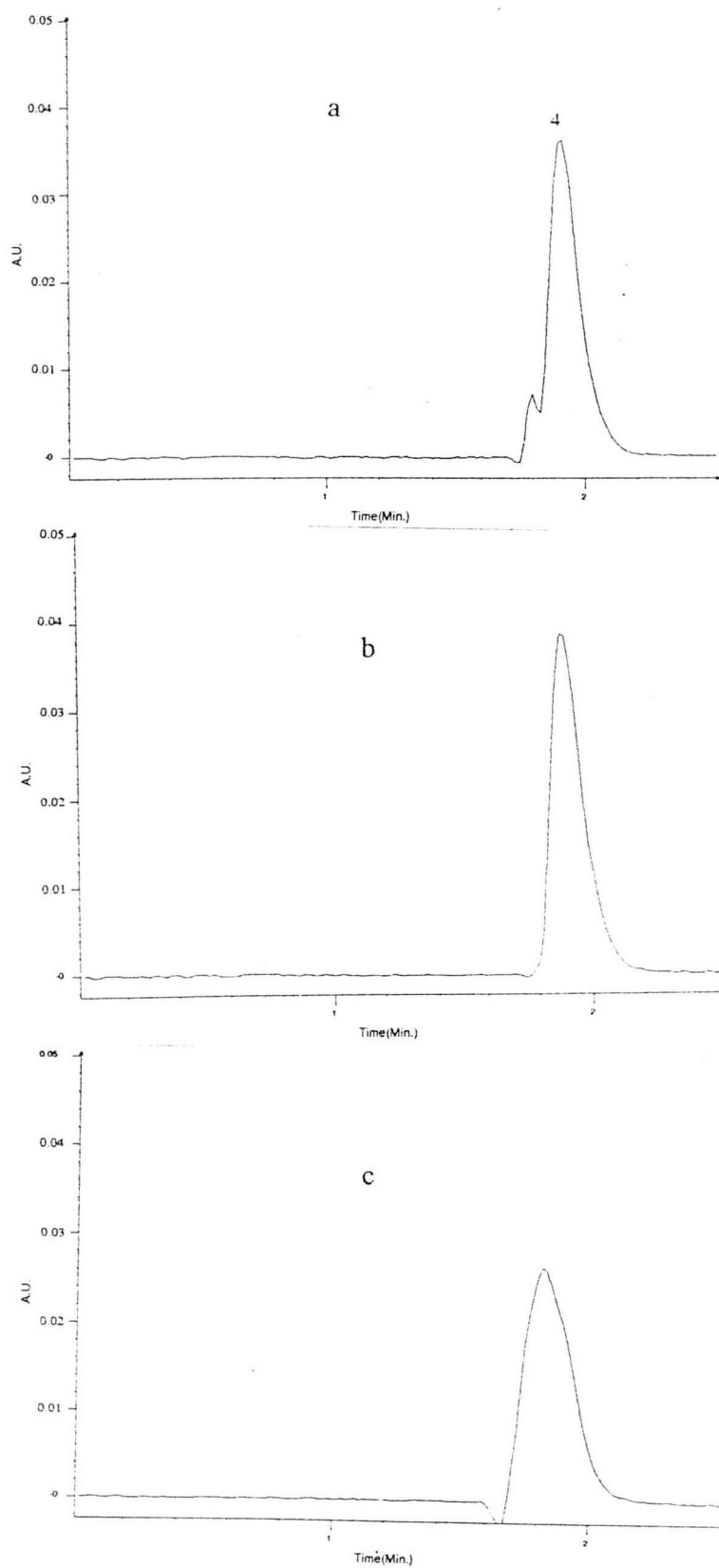


Figure I - 9 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in I - 6

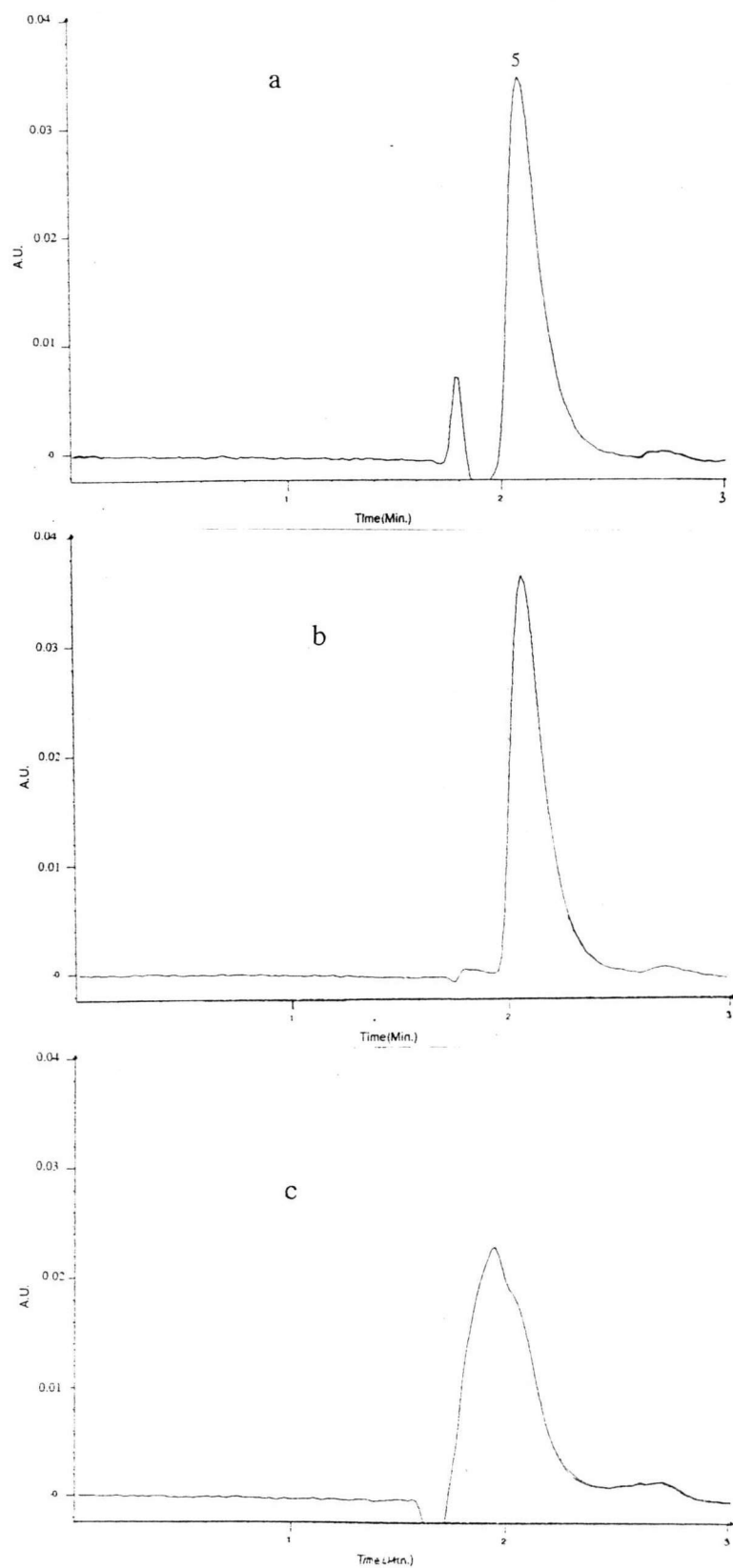


Figure I - 10 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in I - 6

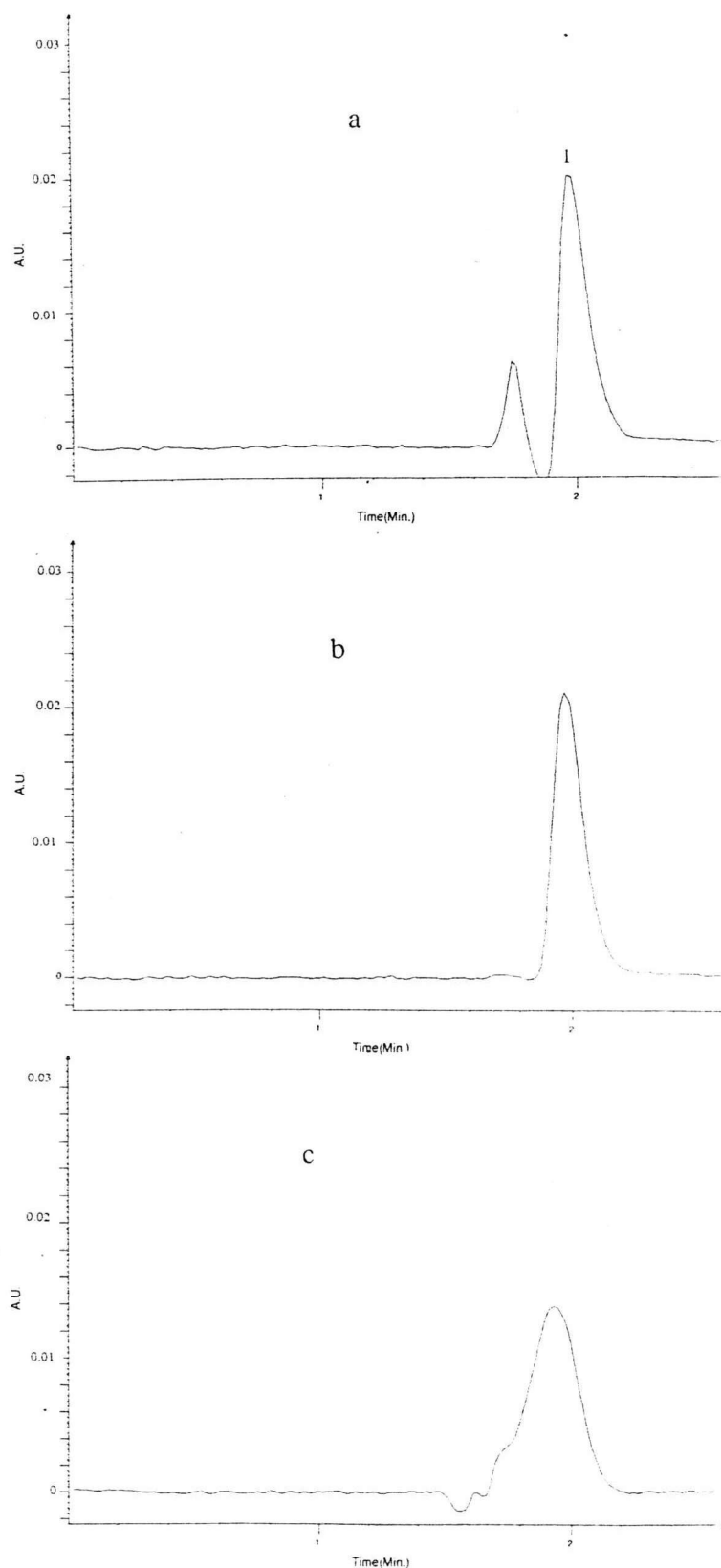


Figure I - 11 Chromatogram of standard phenol (1) at pH 6.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 30% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

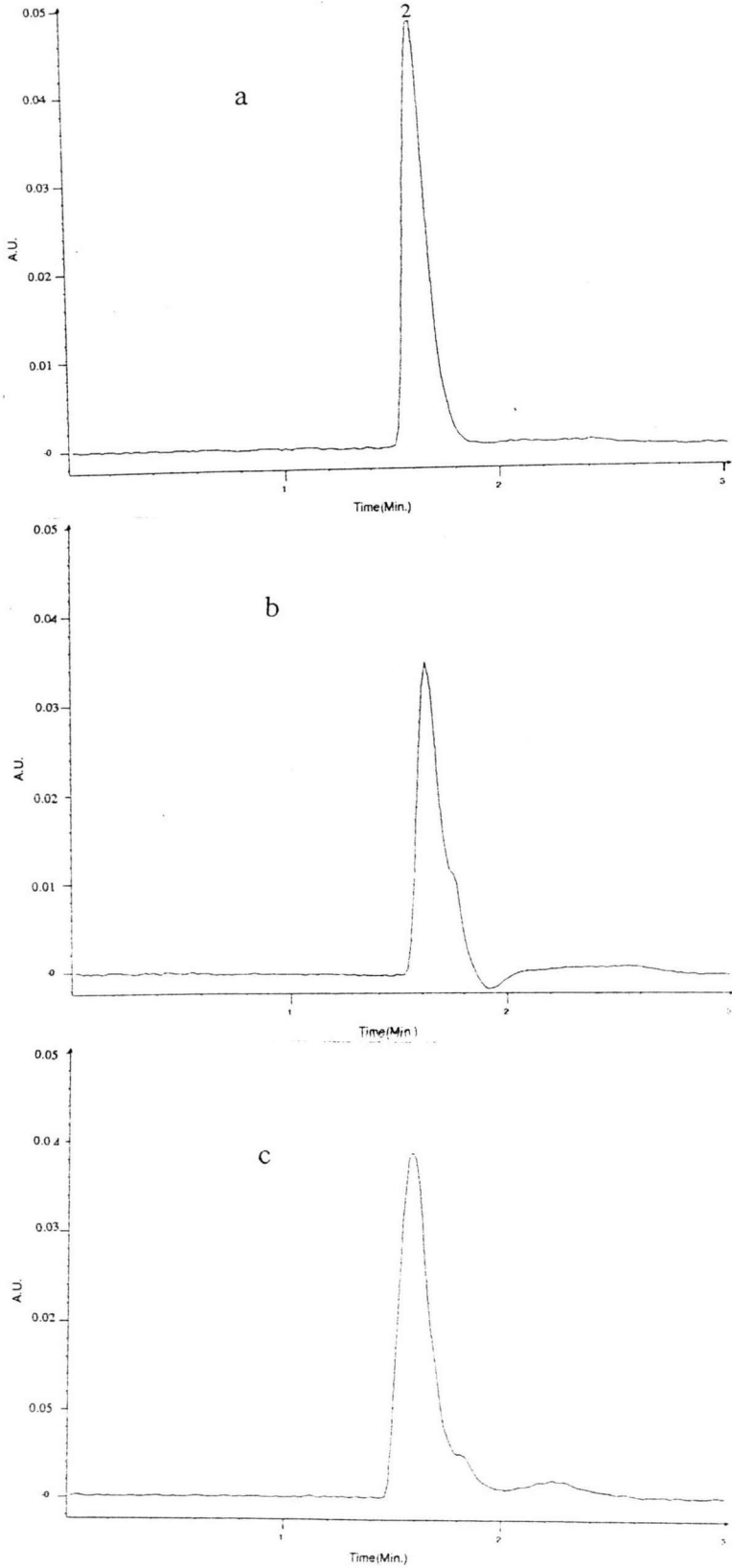


Figure I - 12 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in I - 11

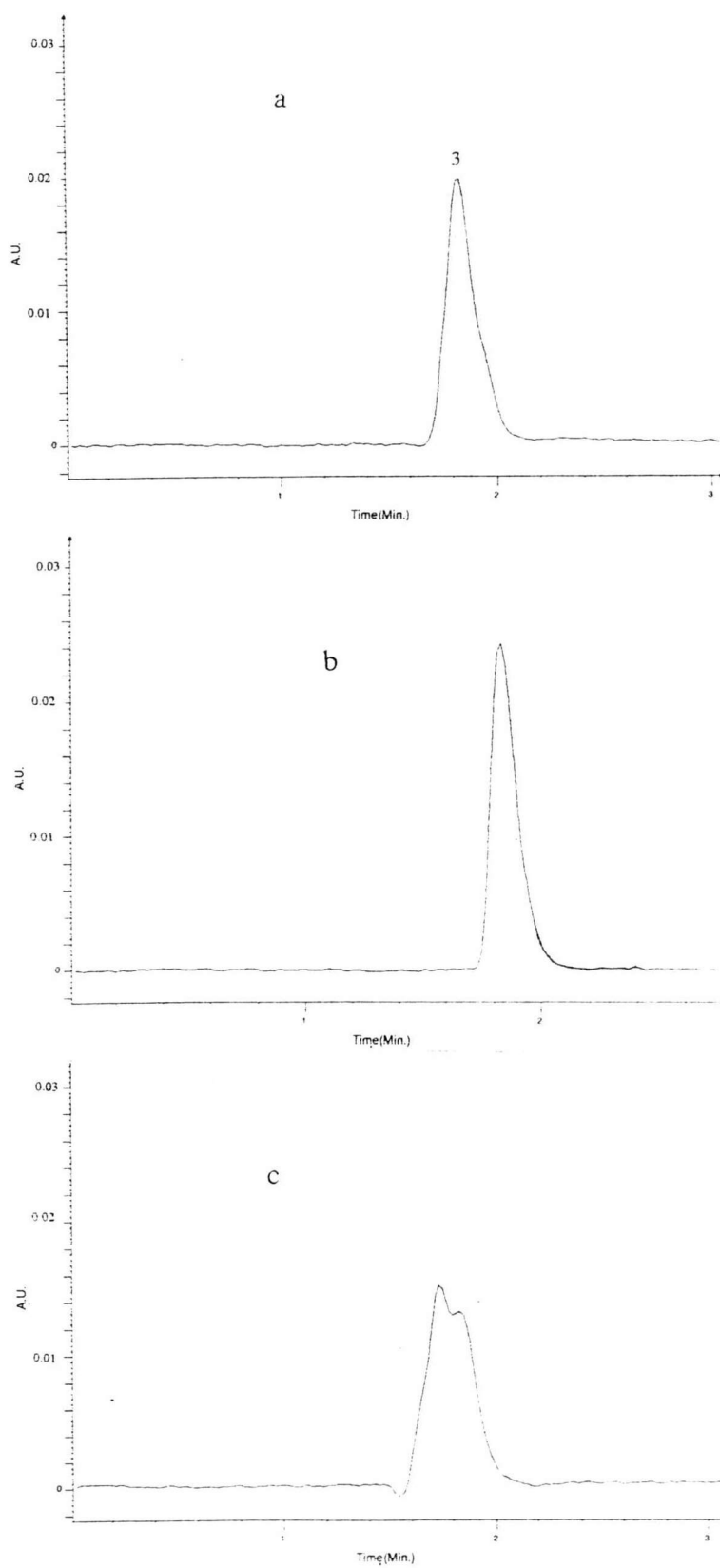


Figure I - 13 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in I - 11

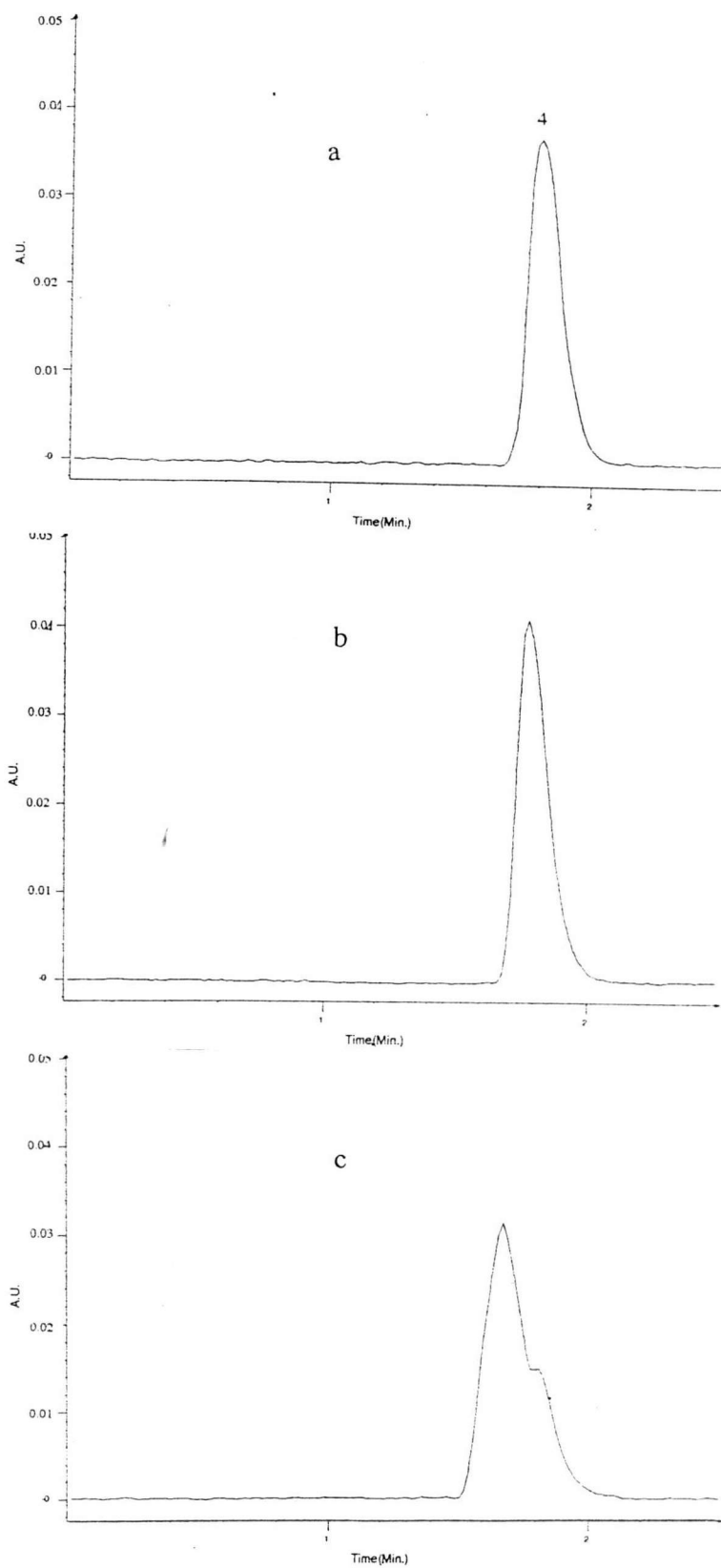


Figure I - 14 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in I - 11

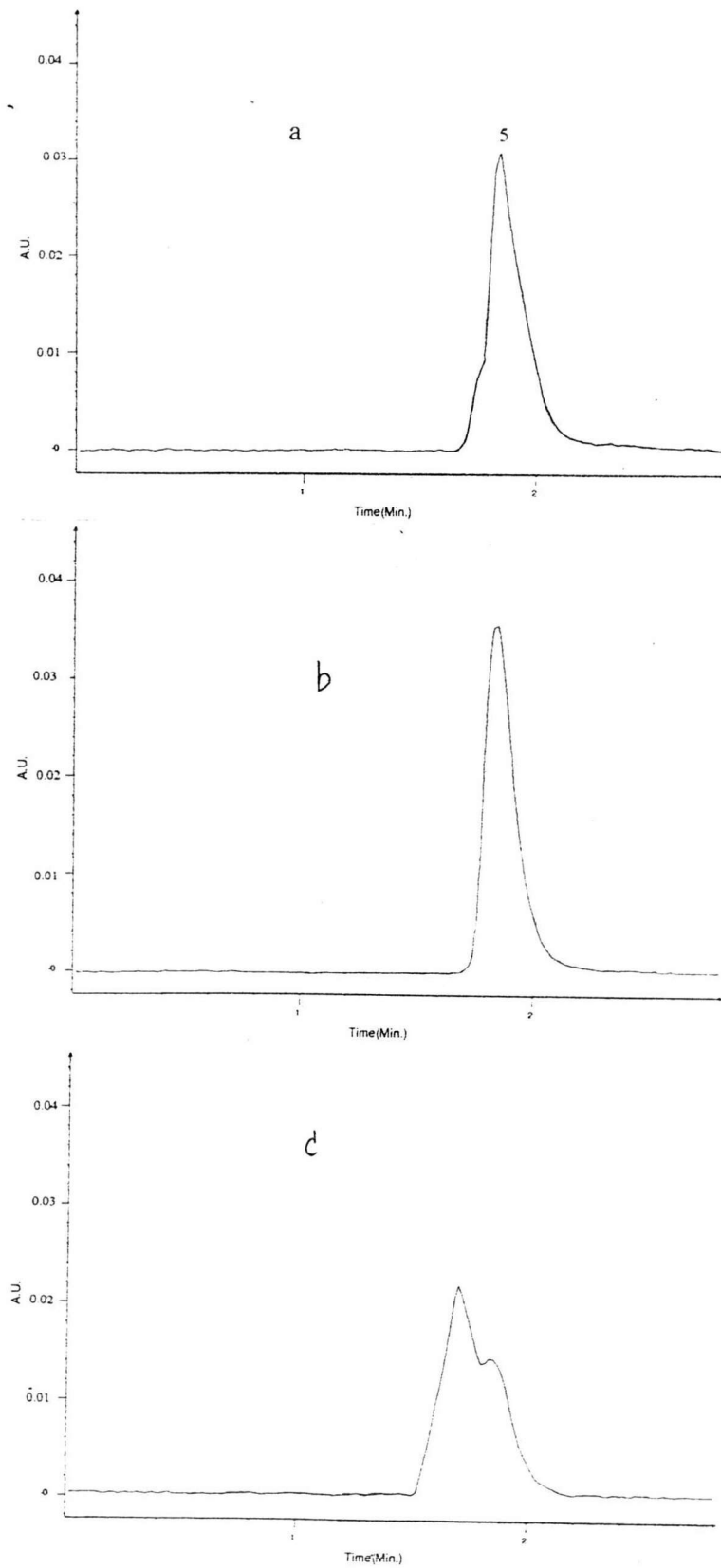


Figure I - 15 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in I - 11

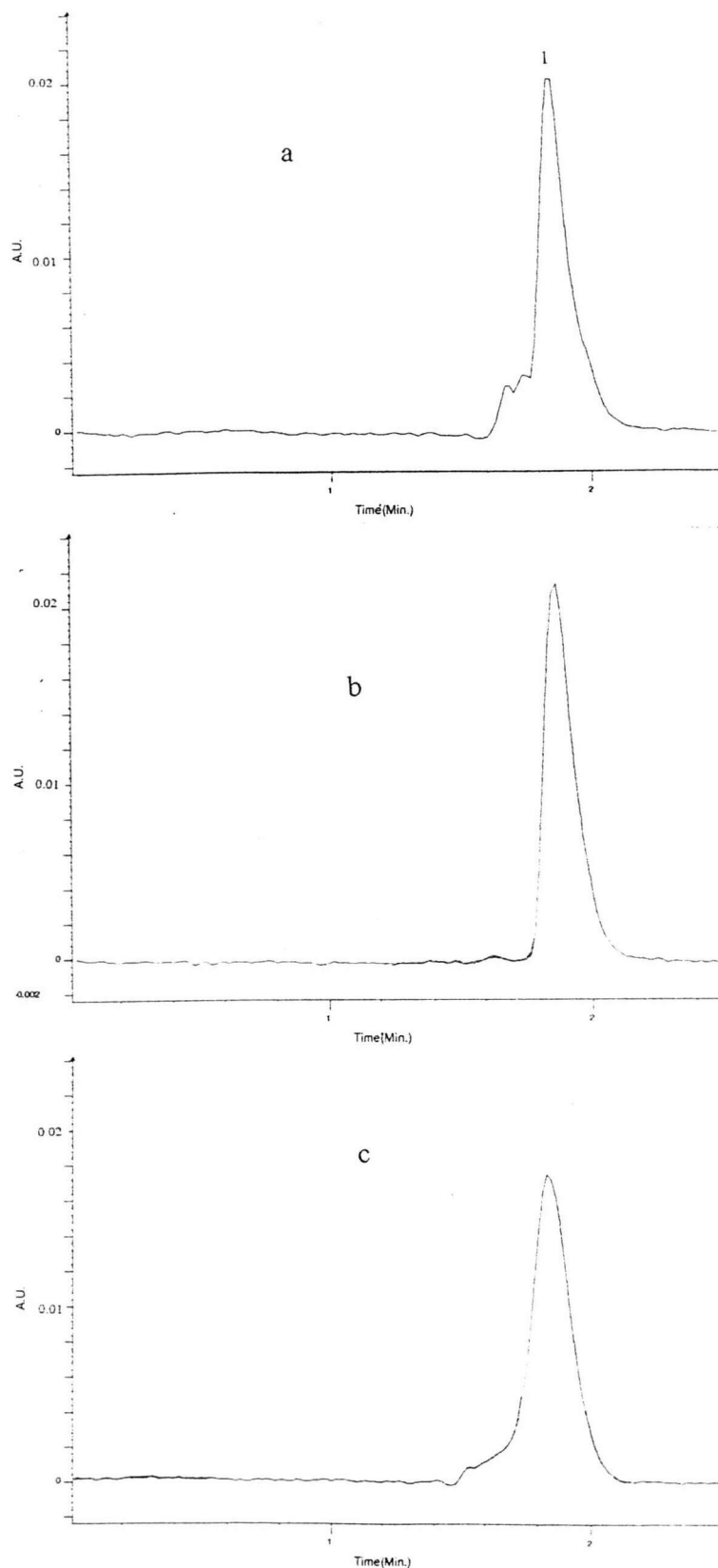


Figure I - 16 Chromatogram of standard phenol (1) at pH 11.5 on phenylpropanolamine column, 5 μm , 150 x 4.6 mm I.D. dissolved in 5% (v/v) acetonitrile (a), 40% (v/v) acetonitrile (b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

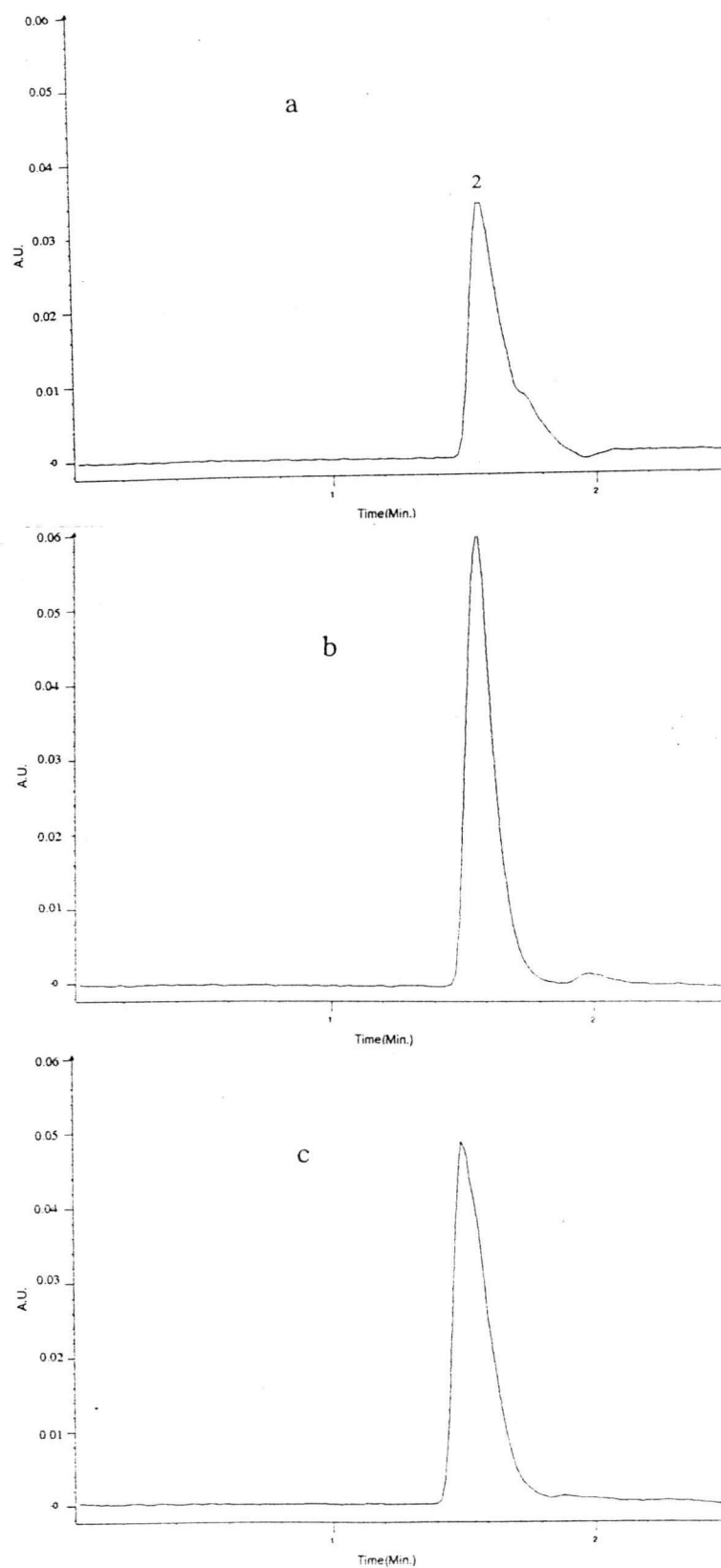


Figure I - 17 Chromatogram of standard L-ascorbic acid (2). Chromatographic conditions as given in I - 16

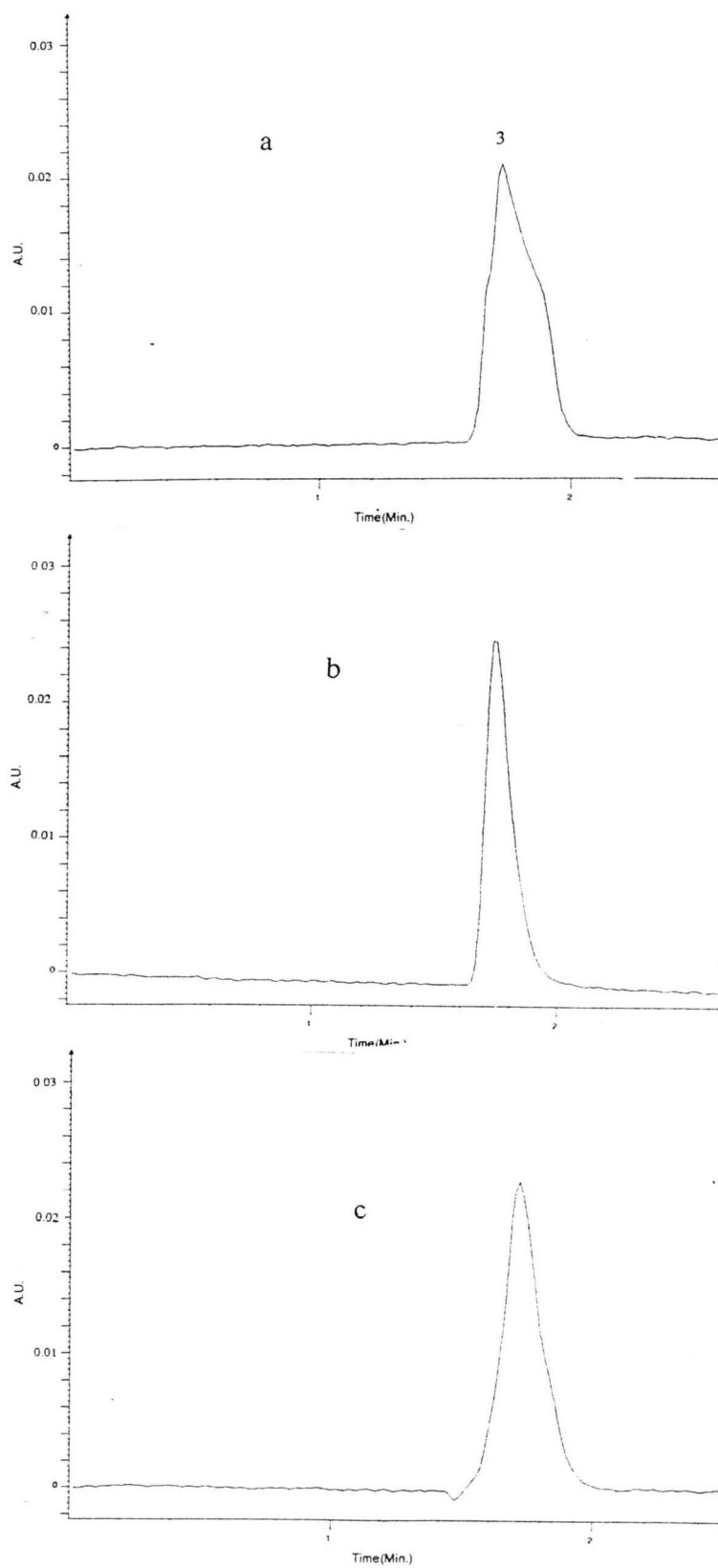


Figure I - 18 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in I - 16

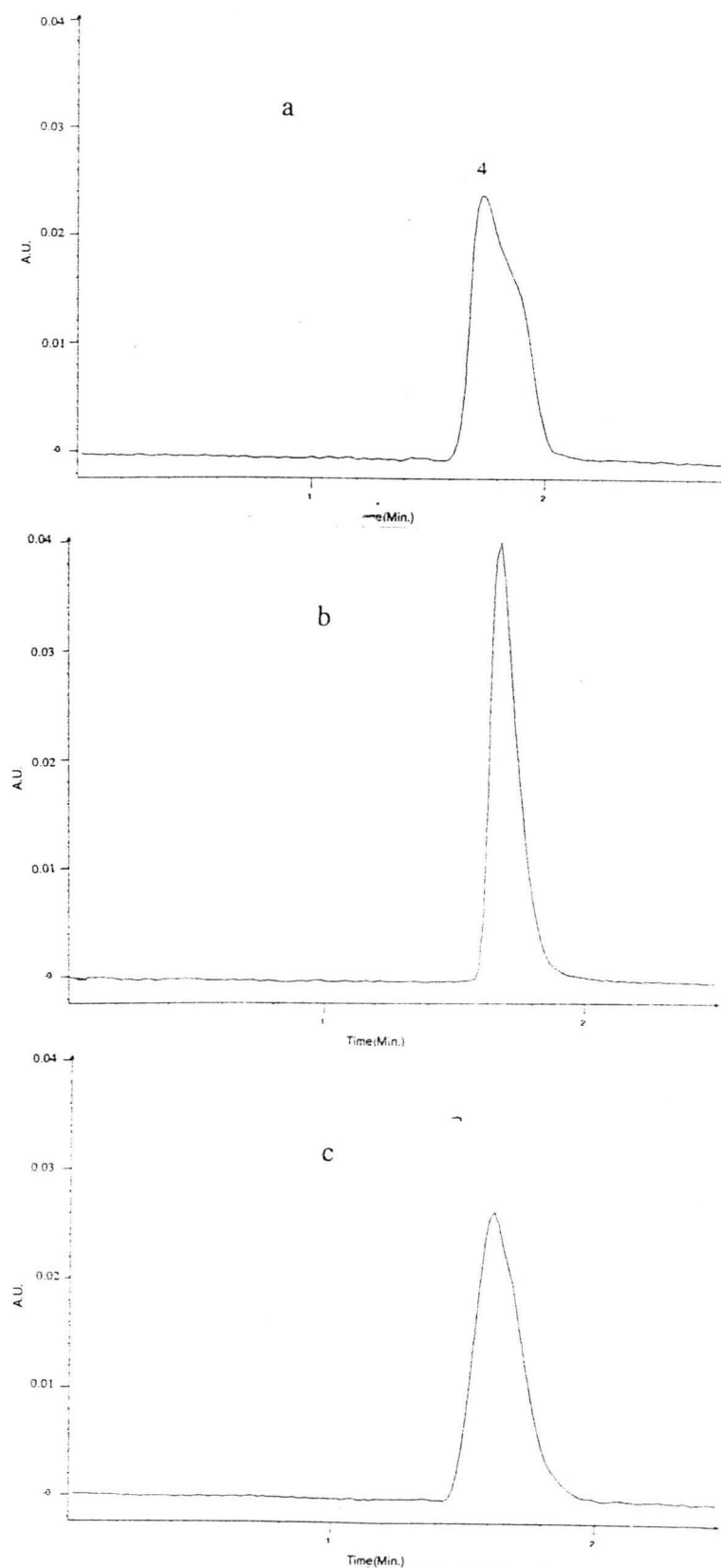


Figure I - 19 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in I - 16

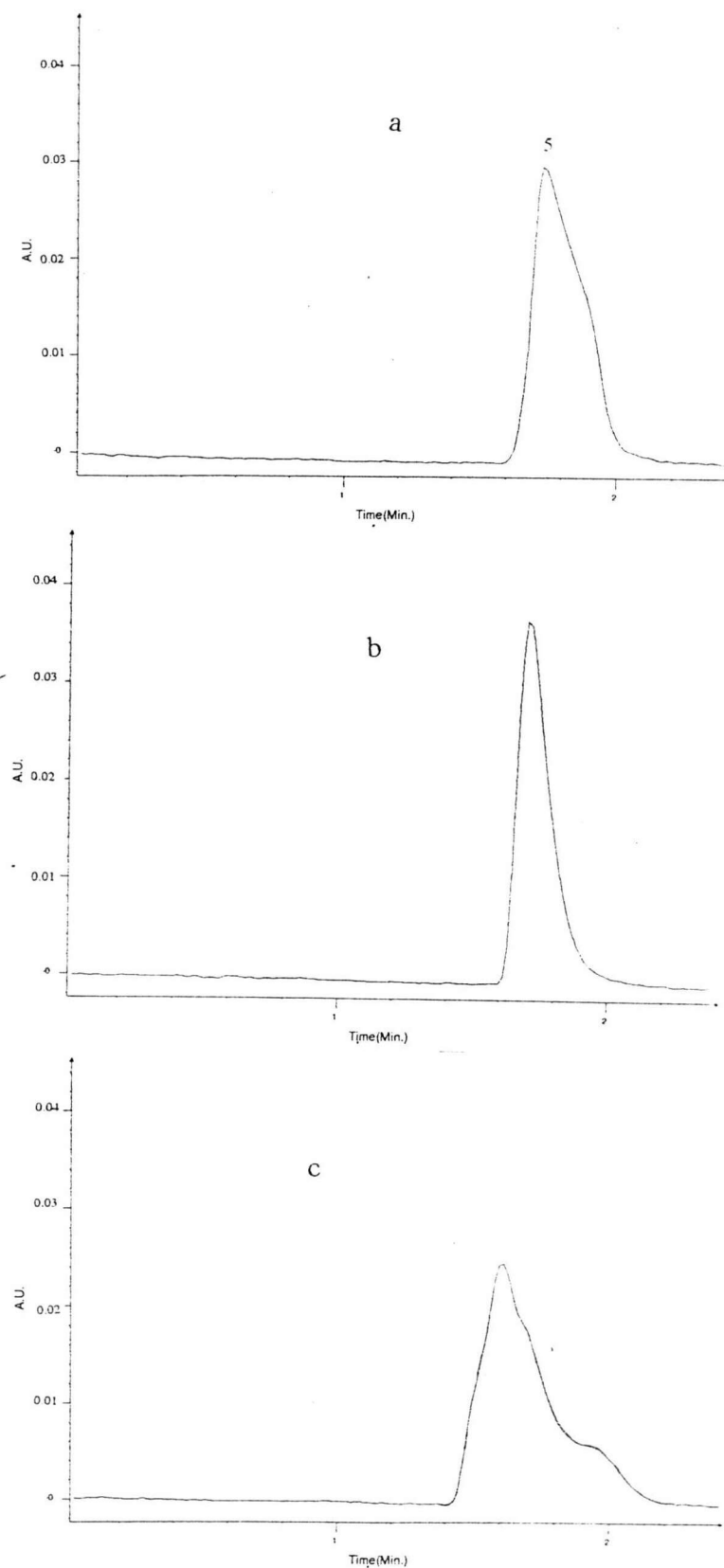


Figure I - 20 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in I - 16

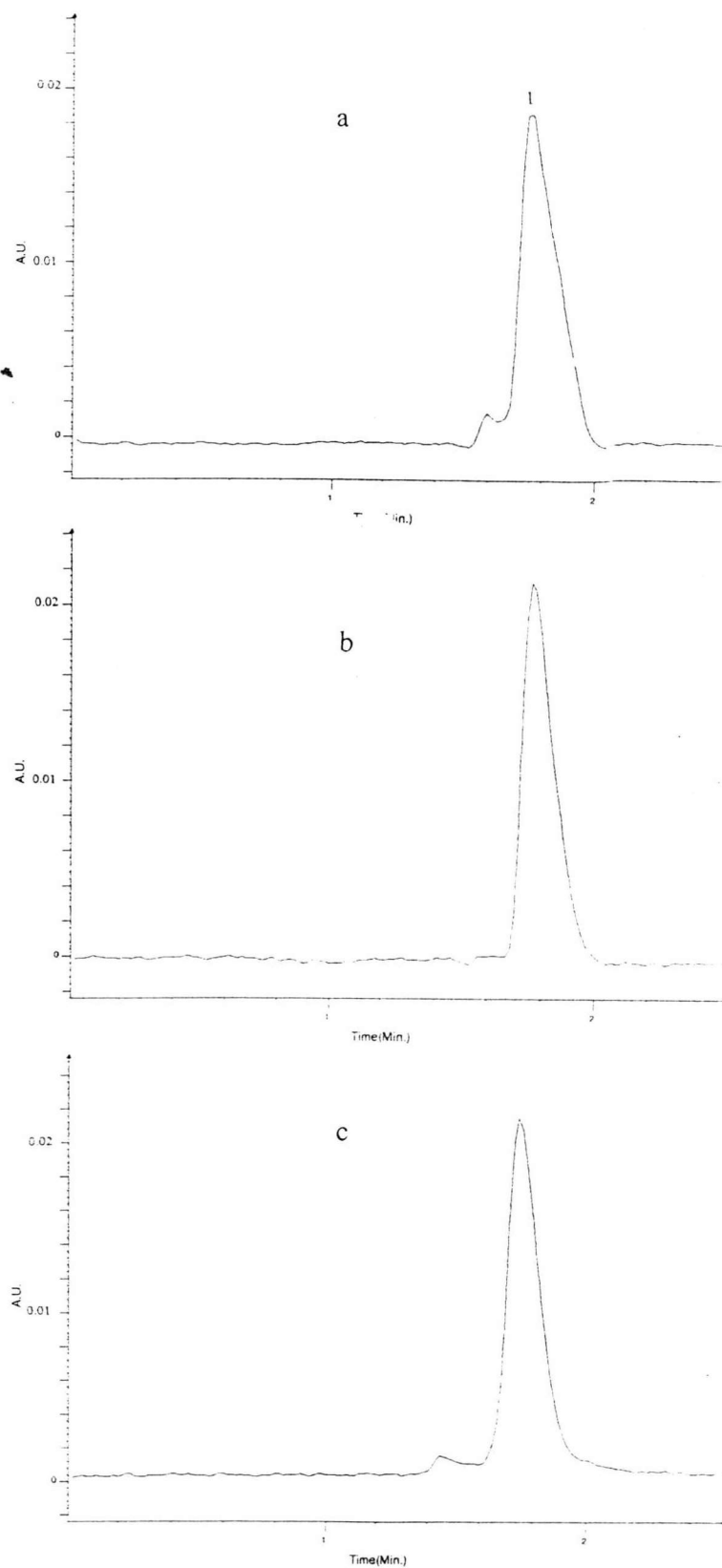


Figure I - 21 Chromatogram of standard phenol (1) at pH 11.5 on phenylpropanolamine column, 5 μ m, 150 x 4.6 mm. I.D. dissolved in 5% (v/v) acetonitrile(a), 50% (v/v) acetonitrile(b), 70% (v/v) acetonitrile (c). Mobile Phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v) ; flow rate 1 ml/min. ; UV 254 nm.

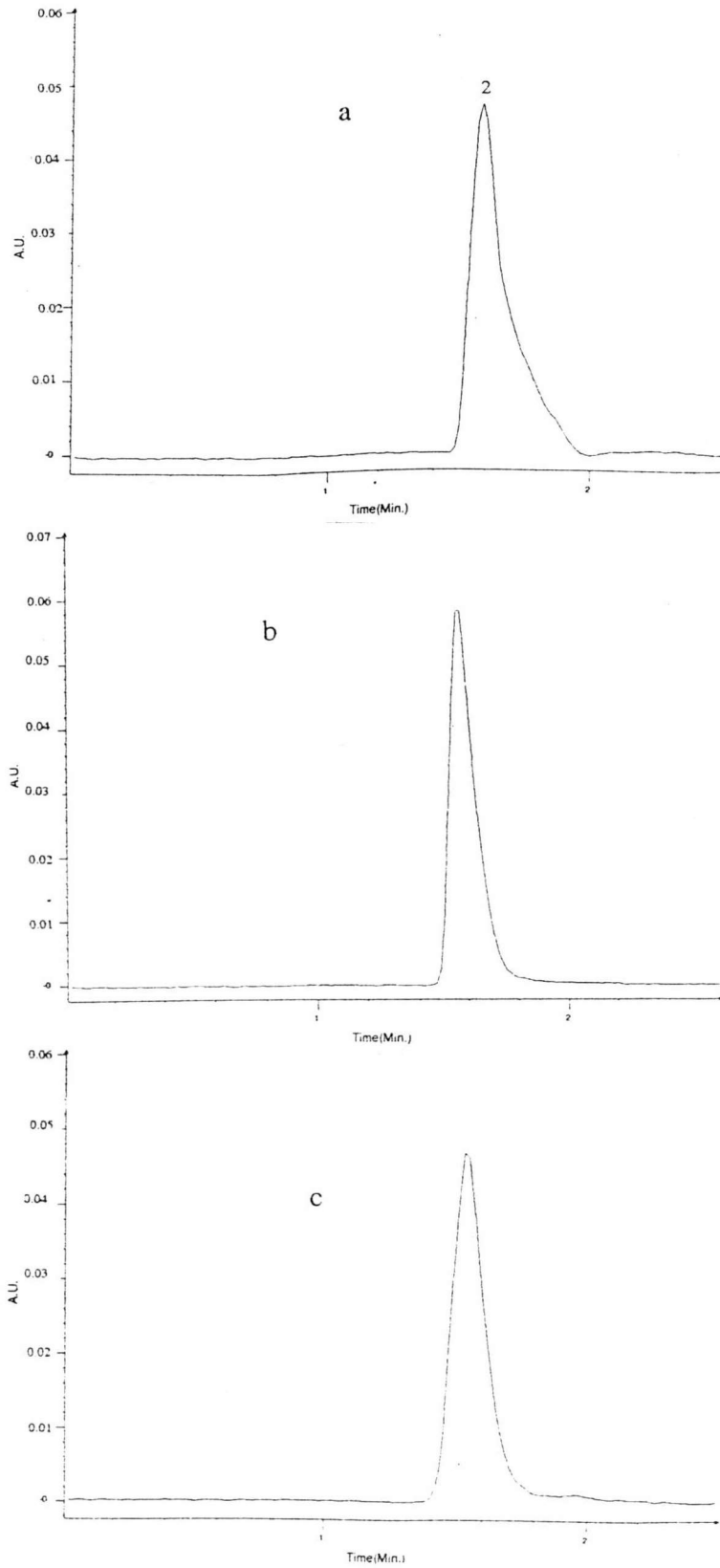


Figure I - 22 Chromatogram standard of L-ascorbic acid (2).
Chromatographic conditions as given in I - 21

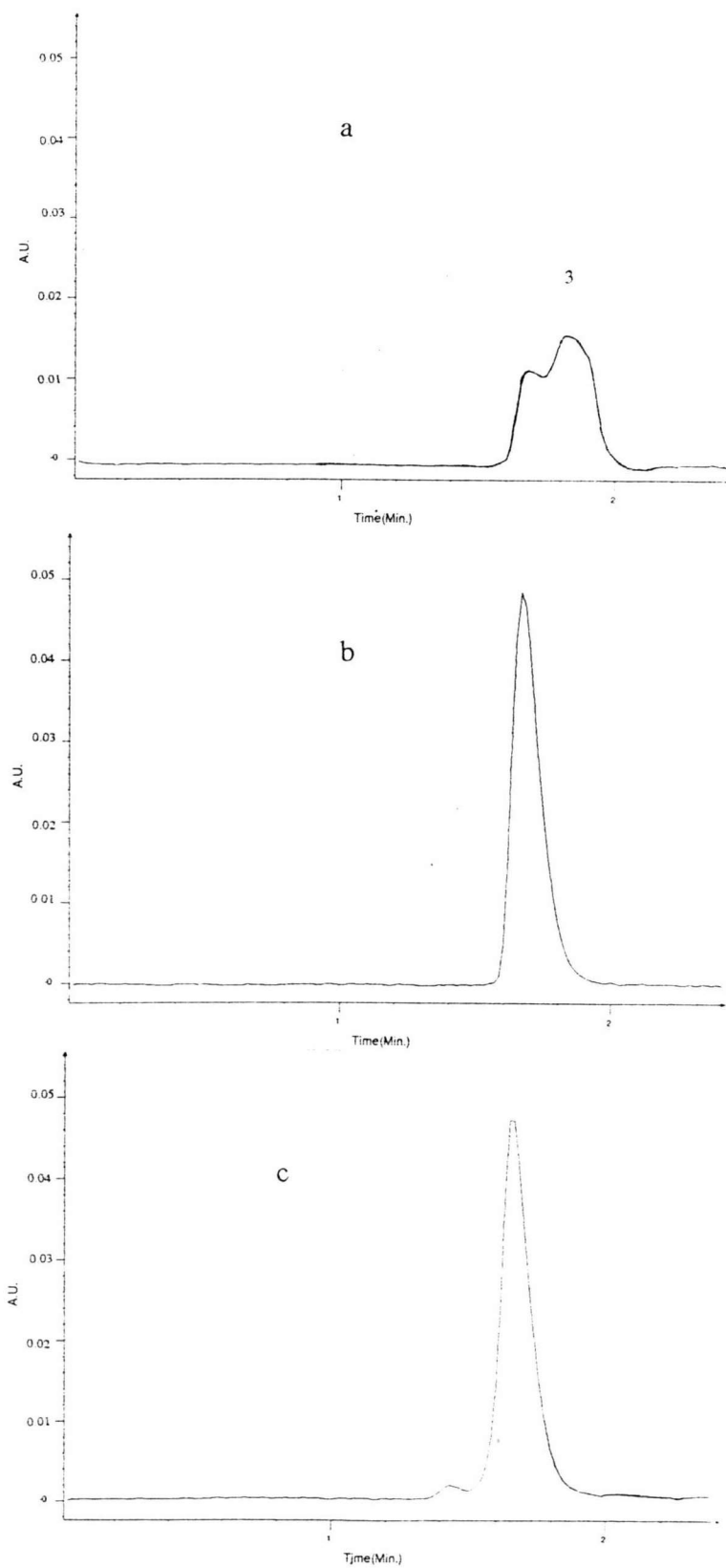


Figure I - 23 Chromatogram of standard benzoic acid (3). Chromatographic conditions as given in I - 21

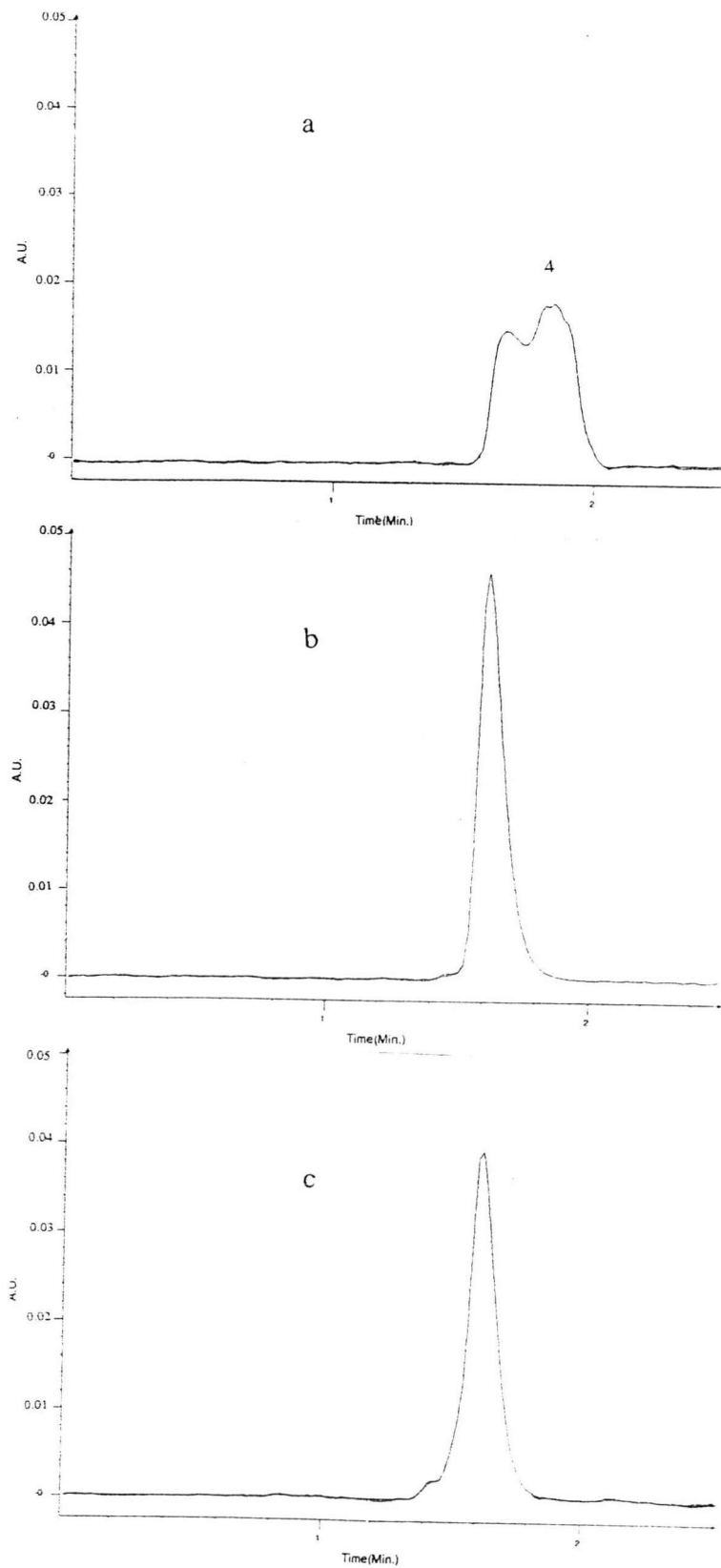


Figure I - 24 Chromatogram of standard acetylsalicylic acid (4). Chromatographic conditions as given in I - 21

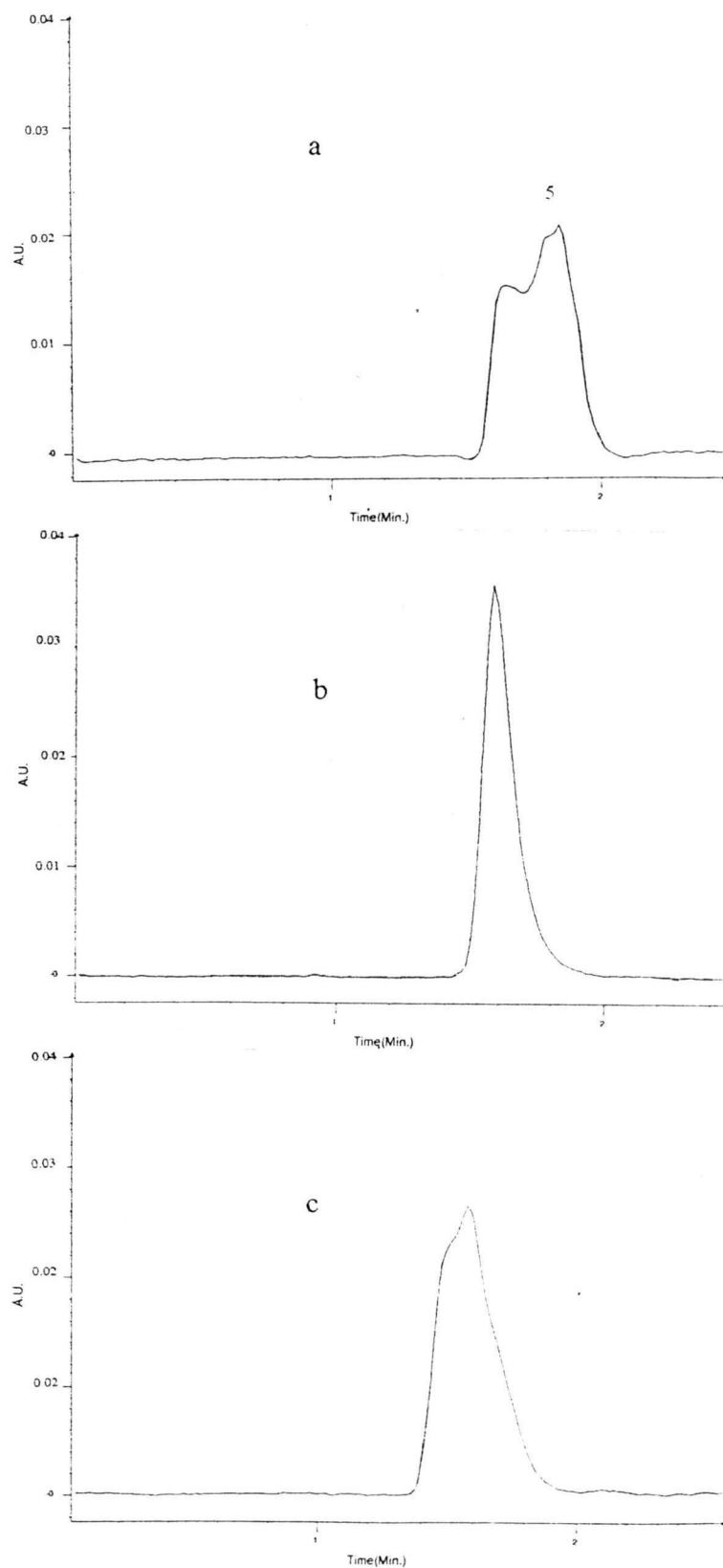


Figure I - 25 Chromatogram of standard salicylic acid (5). Chromatographic conditions as given in I - 21

APPENDIX J

Table J 1 The correlation between % (v/v) of acetonitrile in mobile phase and log capacity factors ($\log k'$) within a pH range 2.5 - 6.5 for phenol at 5% to 90% (v/v) solvent strength.

% SV	pH																	
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5	
	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R
5	-7.93	-0.9966	-8.46	-0.9886	-8.33	-0.9978	-9.05	-0.9898	-6.75	-0.9960	-4.22	-0.8488	-7.49	-0.9839	-6.19	-0.9967	-6.05	-0.9941
10	-7.85	-0.9986	-7.94	-0.9865	-7.44	-0.9903	-9.05	-0.9898	-6.58	-0.9938	-4.22	-0.8488	-7.28	-0.9839	-6.23	-0.9927	-5.92	-0.9979
15	-8.19	-0.9935	-8.05	-0.9891	-7.88	-0.9953	-8.73	-0.9917	-6.41	-0.9927	-4.28	-0.8797	-6.95	-0.9777	-6.67	-0.9958	-6.20	-0.9997
20	-7.37	-0.9993	-8.20	-0.9866	-8.19	-0.9966	-8.50	-0.9902	-6.41	-0.9927	-4.50	-0.9302	-6.96	-0.9839	-6.59	-0.9956	-5.76	-0.9987
30	-7.46	-0.9952	-8.12	-0.9849	-8.19	-0.9972	-8.46	-0.9881	-5.94	-0.9955	-4.64	-0.9592	-7.32	-0.9914	-6.16	-0.9980	-5.64	-0.9995
40	-7.46	-0.9960	-8.12	-0.9844	-7.66	-0.9974	-8.75	-0.9938	-5.89	-0.9957	-4.35	-0.9412	-6.86	-0.9778	-5.72	-0.9986	-5.30	-0.9996
50	-7.43	-0.9928	-7.95	-0.9821	-7.99	-0.9980	-8.35	-0.9811	-5.89	-0.9988	-4.47	-0.9507	-6.86	-0.9858	-5.78	-0.9981	-5.39	-0.9988
60	-7.50	-0.9982	-7.95	-0.9821	-7.99	-0.9980	-8.62	-0.9859	-5.95	-0.9983	-4.83	-0.9594	-6.72	-0.9785	-6.14	-0.9939	-5.51	-0.9987
70	-7.77	-0.9963	-8.25	-0.9837	-8.06	-0.9975	-8.62	-0.9859	-5.95	-0.9983	-4.83	-0.9594	-6.72	-0.9785	-6.14	-0.9939	-5.51	-0.9987
80	-7.77	-0.9963	-8.25	-0.9837	-8.06	-0.9975	-8.62	-0.9859	-5.95	-0.9983	-4.83	-0.9594	-6.72	-0.9785	-6.14	-0.9939	-5.51	-0.9987
90	-7.77	-0.9963	-8.25	-0.9837	-8.06	-0.9975	-8.59	-0.9870	-6.08	-0.9961	-5.23	-0.9623	-7.26	-0.9807	-6.26	-0.9955	-5.51	-0.9963

% SV = % (v/v) of acetonitrile in solvent

B = slope of curves

R = regression coefficient

Table J 2 The correlation between % (v/v) of acetonitrile in mobile phase and log capacity factors ($\log k'$) within a pH range 2.5 - 6.5 for benzoic acid at 5% to 90% (v/v) solvent strength.

% SV	pH																	
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5	
	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R
5	11.30	-0.9992	-11.51	-0.9990	-12.43	-0.9979	-13.48	-0.9955	-9.26	-0.9975	-6.33	-0.9549	-9.26	-0.9919	-6.72	-0.9872	-5.79	-0.8651
10	10.62	-0.9981	-11.64	-0.9994	-12.49	-0.9966	-13.52	-0.9969	-9.26	-0.9980	-6.38	-0.9571	-9.06	-0.9820	-7.00	-0.9926	-6.00	-0.8874
15	10.62	-0.9981	-11.40	-0.9989	-12.52	-0.9979	-13.31	-0.9962	-9.26	-0.9984	-6.43	-0.9665	-8.93	-0.9817	-7.00	-0.9926	-5.26	-0.8671
20	10.57	-0.9983	-11.17	-0.9991	-12.49	-0.9978	-13.21	-0.9967	-9.26	-0.9986	-6.47	-0.9666	-8.82	-0.9820	-6.95	-0.9910	-7.21	-0.9852
30	10.68	-0.9980	-11.41	-0.9993	-12.53	-0.9969	-13.10	-0.9969	-9.26	-0.9986	-6.47	-0.9635	-8.88	-0.9812	-6.96	-0.9915	-6.81	-0.9801
40	10.50	-0.9980	-11.19	-0.9991	-12.43	-0.9966	-12.99	-0.9962	-9.23	-0.9984	-6.49	-0.9687	-8.84	-0.9801	-7.14	-0.9927	-6.74	-0.9841
50	11.40	-0.9982	-11.39	-0.9998	-12.43	-0.9966	-12.95	-0.9958	-9.23	-0.9982	-6.62	-0.9713	-8.87	-0.9931	-7.03	-0.9931	6.74	-0.9841
60	11.43	-0.9968	-11.31	-0.9992	-12.47	-0.9957	-12.92	-0.9958	-9.25	-0.9975	-7.36	-0.9602	-8.71	-0.9798	-7.30	-0.9950	-6.74	-0.9841
70	11.43	-0.9958	-11.57	-0.9987	-12.62	-0.9965	-12.83	-0.9956	-9.18	-0.9976	-7.10	-0.9660	-8.66	-0.9784	-7.17	-0.9938	-6.81	-0.9864
80	10.54	-0.9951	-11.57	-0.9984	-12.70	-0.9963	-12.94	-0.9953	-9.21	-0.9977	-7.47	-0.9637	-8.88	-0.9791	-7.37	-0.9956	-6.37	-0.9848
90	10.82	-0.9967	-10.83	-0.9995	-12.69	-0.9966	-12.92	-0.9954	-9.23	-0.9980	-7.46	-0.9613	-8.84	-0.9777	-7.41	-0.9956	-6.32	-0.9659

% SV = % (v/v) of acetonitrile in solvent

B = slope of curves

R = regression coefficient

Table J 3 The correlation between % (v/v) of acetonitrile in mobile phase and log capacity factors ($\log k'$) within a pH range 2.5 - 6.5 for acetylsalicylic acid at 5% to 90% (v/v) solvent strength.

% SV	pH																	
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5	
	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R
5	12.17	-0.9960	-12.55	-0.9973	-11.63	-0.9942	-10.59	-0.9901	-7.16	-0.9960	-5.03	-0.9756	-7.72	-0.9656	-5.77	-0.9722	-3.48	-0.7662
10	12.14	-0.9951	-12.53	-0.9972	-11.53	-0.9932	-10.61	-0.9912	-7.13	-0.9951	-5.07	-0.9780	-7.67	-0.9628	-5.94	-0.9797	-3.23	-0.7625
15	12.14	-0.9951	-12.53	-0.9972	-11.69	-0.9936	-10.61	-0.9912	-7.13	-0.9950	-5.17	-0.9808	-7.67	-0.9628	-6.22	-0.9848	-3.41	-0.7634
20	11.99	-0.9939	-12.52	-0.9970	-11.74	-0.9932	-10.61	-0.9908	-7.09	-0.9955	-5.24	-0.9827	-7.83	-0.9677	-6.32	-0.9870	-3.41	-0.7634
30	11.85	-0.9931	-12.43	-0.9972	-11.77	-0.9931	-10.61	-0.9908	-7.09	-0.9956	-5.28	-0.9833	-7.79	-0.9678	-6.77	-0.9949	-3.75	-0.8707
40	11.81	-0.9934	-12.43	-0.9972	-11.82	-0.9928	-10.59	-0.9901	-7.16	-0.9972	-5.35	-0.9832	-7.83	-0.9648	-6.87	-0.9954	-5.94	-0.9796
50	11.69	-0.9936	-12.66	-0.9978	-11.83	-0.9929	-10.67	-0.9919	-7.13	-0.9965	-5.48	-0.9837	-7.83	-0.9648	-6.92	-0.9939	-5.88	-0.9594
60	11.70	-0.9928	-12.63	-0.9980	-11.82	-0.9928	-10.71	-0.9922	-7.13	-0.9965	-5.48	-0.9837	-7.83	-0.9648	-6.88	-0.9936	-5.92	-0.9543
70	11.67	-0.9938	-12.73	-0.9967	-11.89	-0.9934	-10.71	-0.9922	-7.13	-0.9965	-5.52	-0.9804	-7.83	-0.9666	-6.73	-0.9944	-6.01	-0.9512
80	11.59	-0.9930	-12.67	-0.9967	-11.99	-0.9921	-10.72	-0.9928	-7.10	-0.9958	-5.48	-0.9788	-7.83	-0.9666	-6.73	-0.9944	-5.80	-0.9544
90	11.59	-0.9929	-12.67	-0.9967	-11.99	-0.9921	-10.69	-0.9926	-7.50	-0.9963	-5.42	-0.9963	-7.78	-0.9618	-6.73	-0.9944	-5.72	-0.9346

% SV = % (v/v) of acetonitrile in solvent

B = slope of curves

R = regression coefficient

Table J 4 The correlation between % (v/v) of acetonitrile in mobile phase and log capacity factors ($\log k'$) within a pH range 2.5 - 6.5 for salicylic acid at 5% to 90% (v/v) solvent strength.

% SV	pH																	
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5	
	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R	B $\times 10^{-3}$	R
5	12.72	-0.9967	-11.60	-0.9992	-11.34	-0.9993	-10.92	-0.9922	-9.50	-0.9920	-9.29	-0.9885	-11.34	-0.9842	-10.79	-0.9787	-6.75	-0.8614
10	12.72	-0.9998	-11.71	-0.9992	-11.42	-0.9992	-10.94	-0.9923	-9.59	-0.9924	-9.27	-0.9882	-11.34	-0.9858	-10.90	-0.9726	-6.85	-0.8891
15	12.69	-0.9997	-11.64	-0.9995	-11.50	-0.9992	-10.91	-0.9926	-9.59	-0.9928	-9.25	-0.9886	-11.90	-0.9873	-10.79	-0.9812	-6.71	-0.8902
20	12.76	-0.9996	-11.67	-0.9993	-11.48	-0.9992	-10.91	-0.9931	-9.62	-0.9939	-9.32	-0.9898	-11.19	-0.9857	-10.74	-0.9713	-7.06	-0.9007
30	12.72	-0.9996	-11.64	-0.9992	-11.47	-0.9991	-10.90	-0.9927	-9.62	-0.9939	-9.35	-0.9903	-11.10	-0.9841	-11.19	-0.9895	-9.12	-0.9924
40	12.60	-0.9975	-11.61	-0.9990	-11.42	-0.9991	-10.96	-0.9928	-9.61	-0.9946	-9.32	-0.9878	-11.25	-0.9900	-11.48	-0.9929	-9.34	-0.9892
50	12.73	-0.9962	-11.63	-0.9987	-11.40	-0.9992	-10.96	-0.9927	-9.62	-0.9938	-9.40	-0.9895	-11.22	-0.9861	-11.52	-0.9920	-9.12	-0.9581
60	12.73	-0.9962	-11.61	-0.9988	-11.41	-0.9990	-11.00	-0.9928	-9.71	-0.9943	-9.37	-0.9905	-11.30	-0.9861	-11.61	-0.9888	-9.71	-0.9745
70	12.75	-0.9998	-11.84	-0.9994	-11.48	-0.9991	-11.05	-0.9931	-9.81	-0.9946	-9.47	-0.9910	-11.50	-0.9862	-11.67	-0.9893	-9.75	-0.9654
80	11.59	-0.9930	-12.67	-0.9967	-11.99	-0.9921	-10.72	-0.9928	-7.10	-0.9958	-5.48	-0.9788	-7.83	-0.9666	-6.73	-0.9944	-5.80	-0.9544
90	12.95	-0.9997	-11.95	-0.9992	-11.42	-0.9991	-11.11	-0.9934	-9.84	-0.9942	-9.39	-0.9909	-12.02	-0.9871	-12.05	-0.9879	-10.78	-0.9897

% SV = % (v/v) of acetonitrile in solvent

B = slope of curves

R = regression coefficient

Table J 5 Effect of eluent's pH on capacity factors (k') at 5% and 90% (v/v) solvent strength ; mobile phase : acetonitrile / 30 mM phosphate buffer (10:90, v/v).

compound	capacity factor (k') at pH																	
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5	
	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90
phenol	1.11	1.10	1.19	1.15	1.18	1.16	1.29	1.29	1.06	1.01	1.15	1.11	1.33	1.30	1.11	1.08	1.10	1.06
L-ascorbic acid	0.74	0.76	0.85	0.83	1.13	1.11	1.62	1.57	1.81	1.82	1.36	1.48	1.43	1.43	0.92	0.90	0.64	0.64
benzoic acid	1.69	1.66	2.07	1.90	2.86	2.87	4.35	4.30	4.06	4.03	3.26	3.49	2.59	2.59	1.78	1.73	1.11	0.99
acetylsalicylic acid	2.03	1.94	2.69	2.64	3.72	3.79	5.11	5.05	3.93	3.89	2.81	2.78	2.28	2.26	1.56	1.50	0.93	0.83
salicylic acid	6.06	6.02	8.33	8.38	9.21	9.23	9.25	9.26	5.81	5.83	3.94	3.91	3.01	3.00	2.26	2.17	1.24	1.08

Table J 6 Effect of eluent's pH on capacity factors (k') at 5% and 90% (v/v) solvent strength ; mobile phase : acetonitrile / 30 mM phosphate buffer (20:80, v/v).

compound	capacity factor (k') at pH																	
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5	
	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90
phenol	0.92	0.88	1.11	1.06	0.94	0.92	0.99	0.94	0.93	0.90	0.93	0.90	1.04	0.96	1.01	0.97	0.94	0.92
L-ascorbic acid	0.73	0.73	0.85	0.83	1.18	1.15	1.48	1.52	1.67	1.67	1.38	1.36	1.10	1.04	0.87	0.82	0.56	0.51
benzoic acid	1.25	1.20	1.55	1.52	2.08	2.03	2.92	2.92	3.14	3.10	2.52	2.49	2.03	1.85	1.48	1.44	0.88	0.78
acetylsalicylic acid	1.36	1.31	2.07	2.07	3.52	3.49	3.49	3.51	3.14	3.10	2.31	2.29	1.54	1.57	1.30	1.29	0.78	0.65
salicylic acid	4.54	4.46	6.43	6.36	7.07	6.92	6.33	6.38	4.23	4.21	2.95	2.89	2.03	1.94	1.71	1.67	0.93	0.78

Table J 7 Effect of eluent's pH on capacity factors (k') at 5% and 90% (v/v) solvent strength ; mobile phase : acetonitrile / 30 mM phosphate buffer (30:70, v/v).

compound	capacity factor (k') at pH																	
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5	
	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90
phenol	0.81	0.74	0.87	0.82	0.82	0.79	0.82	0.74	0.82	0.78	0.83	0.80	0.85	0.82	0.85	0.89	0.82	0.69
L-ascorbic acid	0.73	0.74	0.83	0.85	1.08	1.10	1.50	1.52	1.64	1.62	1.30	1.30	0.93	0.92	0.74	0.69	0.50	0.45
benzoic acid	0.97	0.94	1.19	1.15	1.53	1.50	2.18	2.13	2.50	2.64	2.38	2.15	1.53	1.48	1.20	1.16	0.69	0.64
acetylsalicylic acid	1.06	1.04	1.43	1.41	1.56	1.52	2.82	2.81	2.77	2.75	2.03	2.01	1.36	1.33	1.06	1.04	0.67	0.56
salicylic acid	3.46	3.37	5.04	4.95	5.37	5.37	5.09	5.06	3.51	3.49	2.33	2.31	1.50	1.48	1.20	1.15	0.71	0.57

Table J8 Effect of eluent's pH on capacity factors (k') at 5% and 90% (v/v) solvent strength ; mobile phase : acetonitrile / 30 mM phosphate buffer (40:60, v/v).

compound	capacity factor (k') at pH																		
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5		
	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90	
phenol	0.65	0.64	0.69	0.67	0.66	0.64	0.73	0.69	0.68	0.67	0.71	0.67	0.73	0.73	0.71	0.69	0.71		
L-ascorbic acid	0.78	0.78	0.87	0.88	1.11	1.13	1.56	1.56	1.56	1.57	1.22	1.22	0.90	0.85	0.71	0.69	0.46	0.39	
benzoic acid	0.76	0.76	0.93	0.90	1.15	1.11	1.75	1.71	2.10	2.08	1.82	1.82	1.22	1.27	1.06	1.01	0.60	0.59	
acetylsalicylic acid	0.83	0.81	1.10	1.08	1.56	1.52	2.35	2.33	2.31	2.31	1.96	1.78	1.19	1.19	0.99	0.96	0.60	0.48	
salicylic acid	2.55	2.50	3.83	3.77	4.09	4.05	4.17	4.12	2.78	2.78	1.89	1.89	1.25	1.19	0.94	0.85	0.60	0.50	

Table J9 Effect of eluent's pH on capacity factors (k') at 5% and 90% (v/v) solvent strength ; mobile phase : acetonitrile / 30 mM phosphate buffer (50:50, v/v).

compound	capacity factor (k') at pH																		
	2.5		3.0		3.5		4.0		4.5		5.0		5.5		6.0		6.5		
	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90	5	90	
phenol	0.53	0.53	0.57	0.59	0.54	0.55	0.53	0.56	0.57	0.59	0.81	0.69	0.67	0.64	0.64	0.64	0.64	0.64	0.64
L-ascorbic acid	0.79	0.82	0.90	0.93	1.18	1.20	1.56	1.57	1.61	1.61	1.39	1.34	0.93	0.83	0.71	0.65	0.46	0.45	
benzoic acid	0.59	0.60	0.71	0.71	0.92	2.90	1.19	1.27	1.71	1.70	1.85	1.73	1.15	1.13	0.92	0.88	0.69	0.55	
acetylsalicylic acid	0.64	0.65	0.87	0.85	1.24	1.22	1.84	1.81	2.01	1.90	1.71	1.69	1.10	1.06	0.92	0.81	0.71	0.50	
salicylic acid	1.87	1.81	2.84	2.75	3.28	3.24	3.24	3.21	2.40	2.31	1.69	1.64	1.04	0.96	0.88	0.76	0.71	0.39	

VITA

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