

#### Ketamine Hydrochloride:

5.00g Ketamine HCl raw drug powder from Spectrum chemical (part number K1068, Lot # 1CD0165) was added to 100.00g Humco Salt-Stable LS Advanced (Humco Holding Group, Texarkana, Texas) and levigated with an electronic mortar and pestle, resulting in a final concentration of 5.0% w/w. This emulsion was then stored at room temperature in the same Unguator container.

Similar steps were used in preparing the following combination compounds:

Compound 1 (2% Baclofen + 0.2% Clonidine HCl + 10% Gabapentin + 5% Ketamine HCl)

Compound 2 (2% Baclofen + 1% Bupivacaine HCl + 2% Cyclobenzaprine HCl + 5% Diclofenac Na + 6% Gabapentin + 3% Ibuprofen + 10% Ketamine HCl + 3% Pentoxifylline)

Samples were prepared every 14 days by a 5.00 g accurately weighed sample being transferred to a 50.0 ml volumetric flask. The contents of the flask were diluted to volume with matrix matched mobile phase for HPLC determination.

Results were compared and samples were analyzed each 14 day interval. The limits of acceptance of results were to be < 90% theoretical concentration of initial prepared sample. The results were tabulated for each 14 day interval and examples of chromatography are attached which show standard preparations, initial interval, and latest products.

#### 90-Day Summary:

Compounded at 5.0% w/w in Compound 1 (2% Baclofen + 0.2% Clonidine HCl + 10% Gabapentin + 5% Ketamine HCl), stability-indicating HPLC analysis found negligible Ketamine Hydrochloride loss in Humco Salt-Stable LS Advanced at 90 days.

Compounded at 10.0% w/w in Compound 2 (2% Baclofen + 1% Bupivacaine HCl + 2% Cyclobenzaprine HCl + 5% Diclofenac Na + 6% Gabapentin + 3% Ibuprofen + 10% Ketamine HCl + 3% Pentoxifylline), stability-indicating HPLC analysis found less than 8% Ketamine Hydrochloride loss in Humco Salt-Stable LS Advanced at 90 days.

Attached are 4 chromatographs of Humco Salt-Stable LS Advanced showing 90-Day Standard, and 90-Day Sample of both combination compounds.

PENT, DICL, KET, VER, CYC, IBU STD IN MEOH

XbridgeC18150x4.6x3.5,1ml/min,30C Buf5mMNa2B4O7,ACN,MEO

H, 80Buf20MEOH HOLD TO2MIN,58Buf14ACN28MeOH@5.5min to 4

3Buf24ACN33MEOH@9min,46Buf14ACN40MEOH@10MIN,5 buff

47.5ACN/MEOH@16min TILL18 min

->

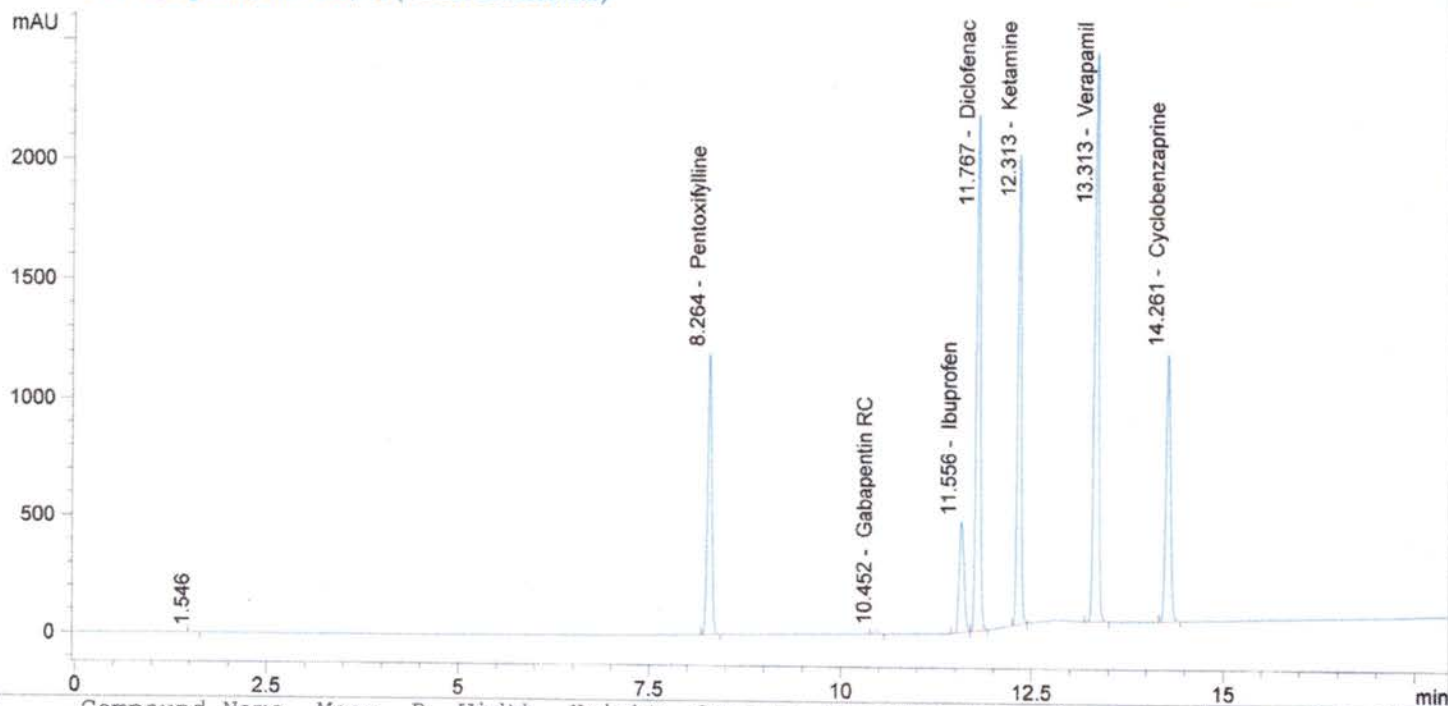
Method Inj vol  
Actual inj vol

5ul  
5ul

Injection date and Time 8/27/2013 6:16:06 PM

Vial 43 Inj # 2

DAD1 B, Sig=210,5 Ref=360,100 (130801\BUD00079.D)



| #     | Compound Name   | Meas. R | Width | Height | Symmetr | Response Fact | Amount  | Area  | Area % |
|-------|-----------------|---------|-------|--------|---------|---------------|---------|-------|--------|
| 1.0   |                 | 1.546   | 0.049 | 3      | 0.652   | 0.00000       | 0.00000 | 10    | 0.03   |
| 2.0   | Gabapentin      | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 3.0   | Baclofen        | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 4.0   | Pentoxifylline  | 8.264   | 0.057 | 1202   | 0.910   | 4.05347e-5    | 0.17934 | 4424  | 12.70  |
| 5.0   | Clonidine       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 6.0   | ketoprofen      | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 7.0   | Gabapentin RC   | 10.452  | 0.064 | 15     | 0.913   | 0.00000       | 0.00000 | 64    | 0.18   |
| 8.0   | Flurbiprofen    | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 9.0   | Ibuprofen       | 11.556  | 0.070 | 474    | 0.665   | 8.61798e-5    | 0.18351 | 2129  | 6.11   |
| 10.0  | Diclofenac      | 11.767  | 0.057 | 2201   | 0.804   | 3.31767e-5    | 0.25831 | 7786  | 22.34  |
| 11.0  | Ketamine        | 12.313  | 0.054 | 2014   | 0.909   | 7.39912e-5    | 0.47976 | 6484  | 18.61  |
| 12.0  | Triclosan       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 13.0  | Lidocaine       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 14.0  | Verapamil       | 13.313  | 0.061 | 2417   | 0.890   | 5.53591e-5    | 0.51370 | 9279  | 26.63  |
| 15.0  | Bupivacaine     | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 16.0  | Cyclobenzaprine | 14.261  | 0.063 | 1150   | 0.897   | 3.87244e-5    | 0.18093 | 4672  | 13.41  |
| 17.0  | Amitriptyline   | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| total |                 |         |       |        |         |               | 1.79556 | 34849 | 100.00 |

HUMCO 03192013@144 264.3MG/50ML MEOH

XbridgeC18150x4.6x3.5, 1ml/min, 30C Buf5mMNa2B4O7, ACN, MEO

H, 80Buf20MEOH HOLD TO2MIN, 58Buf14ACN28MeOH@5.5min to 4

3Buf24ACN33MEOH@9min, 46Buf14ACN40MEOH@10MIN, 5 buff

47.5ACN/MEOH@16min TILL18 min

->

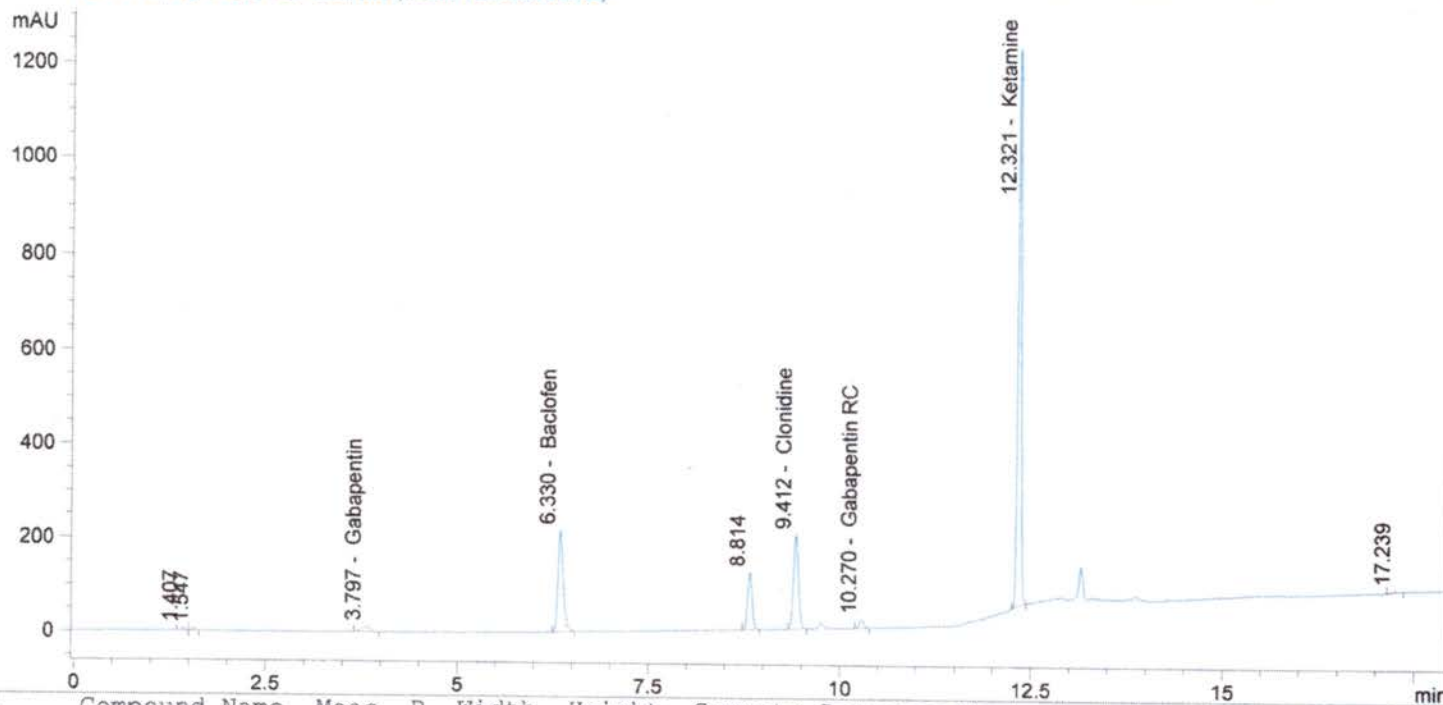
Injection date and Time 8/27/2013 8:35:35 PM

Vial 56 Inj # 2

Method Inj vol  
Actual inj vol

5ul  
5ul

DAD1 B, Sig=210,5 Ref=360,100 (130801\BUD00085.D)



| #     | Compound Name   | Meas. R | Width | Height | Symmetr | Response Fact | Amount  | Area | Area % |
|-------|-----------------|---------|-------|--------|---------|---------------|---------|------|--------|
| 1.0   |                 | 1.407   | 0.056 | 6      | 0.901   | 0.00000       | 0.00000 | 22   | 0.33   |
| 2.0   |                 | 1.547   | 0.056 | 3      | 0.574   | 0.00000       | 0.00000 | 13   | 0.19   |
| 3.0   | Gabapentin      | 3.797   | 0.109 | 11     | 0.938   | 0.00000       | 0.00000 | 77   | 1.18   |
| 4.0   | Baclofen        | 6.330   | 0.077 | 216    | 0.699   | 0.00000       | 0.00000 | 1094 | 16.86  |
| 5.0   | Pentoxifylline  | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 6.0   |                 | 8.814   | 0.066 | 122    | 0.904   | 0.00000       | 0.00000 | 519  | 8.01   |
| 7.0   | Clonidine       | 9.412   | 0.070 | 200    | 0.879   | 0.00000       | 0.00000 | 894  | 13.79  |
| 8.0   | ketoprofen      | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 9.0   | Gabapentin RC   | 10.270  | 0.066 | 18     | 0.911   | 0.00000       | 0.00000 | 77   | 1.19   |
| 10.0  | Flurbiprofen    | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 11.0  | Ibuprofen       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 12.0  | Diclofenac      | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 13.0  | Ketamine        | 12.321  | 0.053 | 1192   | 0.915   | 7.40032e-5    | 5.29519 | 3782 | 58.30  |
| 14.0  | Triclosan       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 15.0  | Lidocaine       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 16.0  | Verapamil       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 17.0  | Bupivacaine     | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 18.0  | Cyclobenzaprine | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 19.0  | Amitriptyline   | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0    | 0.00   |
| 20.0  |                 | 17.239  | 0.064 | 2      | 1.370   | 0.00000       | 0.00000 | 10   | 0.15   |
| total |                 |         |       |        |         |               | 5.29519 | 6488 | 100.00 |



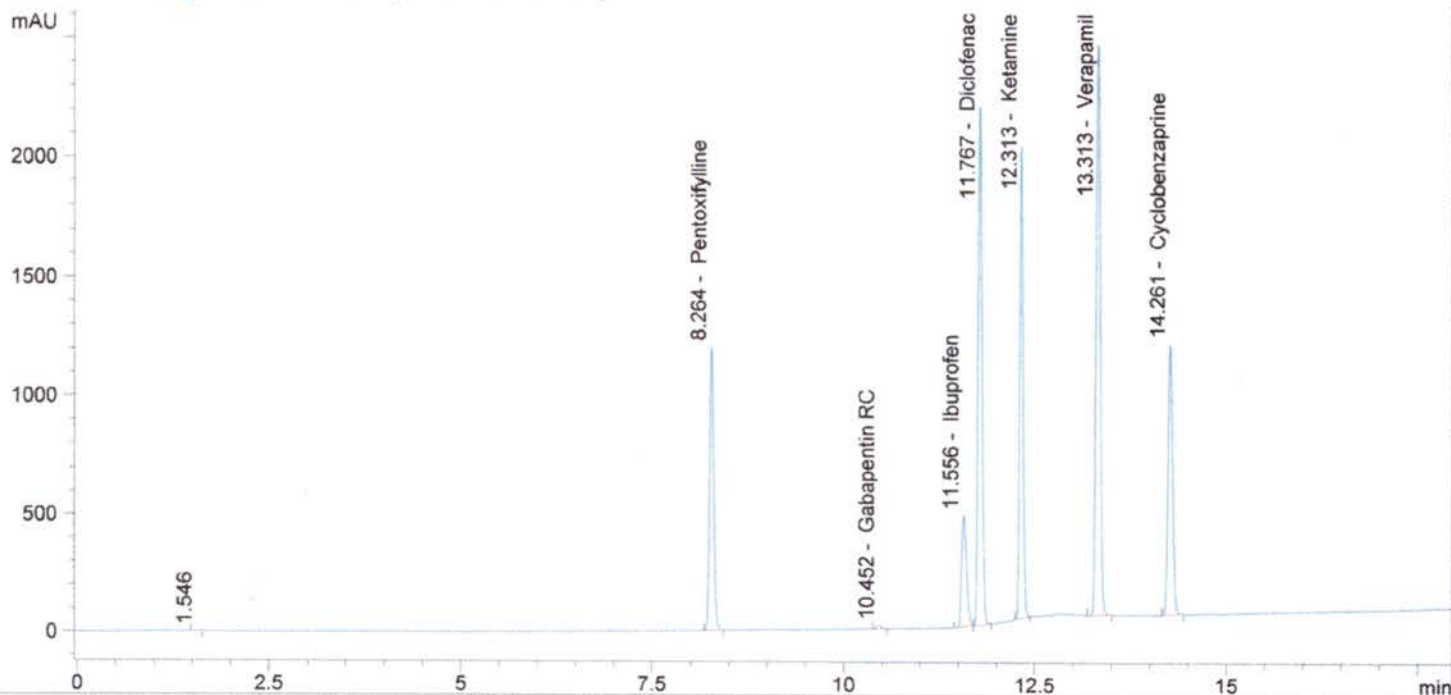
PENT, DICL, KET, VER, CYC, IBU STD IN MEOH  
 XbridgeC18150x4.6x3.5, 1ml/min, 30C Buf5mMNa2B4O7, ACN, MEO  
 H, 80Buf20MEOH HOLD TO2MIN, 58Buf14ACN28MeOH@5.5min to 4  
 3Buf24ACN33MEOH@9min, 46Buf14ACN40MEOH@10MIN, 5 buff  
 47.5ACN/MEOH@16min TILL18 min

Injection date and Time 8/27/2013 6:16:06 PM

Vial 43 Inj # 2

->  
 Method Inj vol 5ul  
 Actual inj vol 5ul

DAD1 B, Sig=210,5 Ref=360,100 (130801\BUD00079.D)



| #     | Compound Name   | Meas. R | Width | Height | Symmetr | Response Fact | Amount  | Area  | Area % |
|-------|-----------------|---------|-------|--------|---------|---------------|---------|-------|--------|
| 1.0   |                 | 1.546   | 0.049 | 3      | 0.652   | 0.00000       | 0.00000 | 10    | 0.03   |
| 2.0   | Gabapentin      | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 3.0   | Baclofen        | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 4.0   | Pentoxifylline  | 8.264   | 0.057 | 1202   | 0.910   | 4.05347e-5    | 0.17934 | 4424  | 12.70  |
| 5.0   | Clonidine       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 6.0   | ketoprofen      | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 7.0   | Gabapentin RC   | 10.452  | 0.064 | 15     | 0.913   | 0.00000       | 0.00000 | 64    | 0.18   |
| 8.0   | Flurbiprofen    | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 9.0   | Ibuprofen       | 11.556  | 0.070 | 474    | 0.665   | 8.61798e-5    | 0.18351 | 2129  | 6.11   |
| 10.0  | Diclofenac      | 11.767  | 0.057 | 2201   | 0.804   | 3.31767e-5    | 0.25831 | 7786  | 22.34  |
| 11.0  | Ketamine        | 12.313  | 0.054 | 2014   | 0.909   | 7.39912e-5    | 0.47976 | 6484  | 18.61  |
| 12.0  | Triclosan       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 13.0  | Lidocaine       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 14.0  | Verapamil       | 13.313  | 0.061 | 2417   | 0.890   | 5.53591e-5    | 0.51370 | 9279  | 26.63  |
| 15.0  | Bupivacaine     | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| 16.0  | Cyclobenzaprine | 14.261  | 0.063 | 1150   | 0.897   | 3.87244e-5    | 0.18093 | 4672  | 13.41  |
| 17.0  | Amitriptyline   | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000 | 0     | 0.00   |
| total |                 |         |       |        |         |               | 1.79556 | 34849 | 100.00 |

HUMCO 03192013@135 302.6MG/50ML MEOH  
 XbridgeC18150x4.6x3.5, 1ml/min, 30C Buf5mMNa2B4O7, ACN, MEO  
 H, 80Buf20MEOH HOLD TO2MIN, 58Buf14ACN28MeOH@5.5min to 4  
 3Buf24ACN33MEOH@9min, 46Buf14ACN40MEOH@10MIN, 5 buff  
 47.5ACN/MEOH@16min TILL18 min

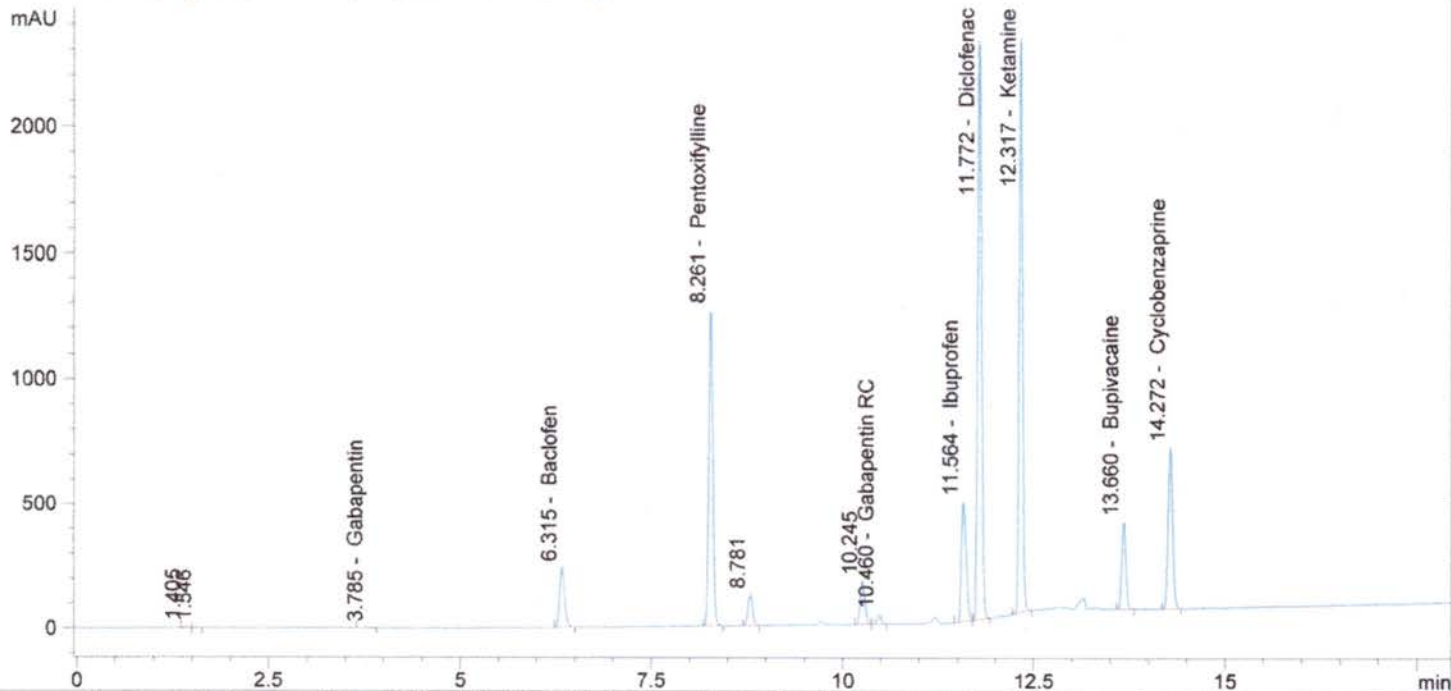
->

Injection date and Time 8/27/2013 6:39:17 PM

Vial 54 Inj # 1

Method Inj vol 5ul  
 Actual inj vol 5ul

DAD1 B, Sig=210,5 Ref=360,100 (130801\BUD00080.D)



| #     | Compound Name   | Meas. R | Width | Height | Symmetr | Response Fact | Amount   | Area  | Area % |
|-------|-----------------|---------|-------|--------|---------|---------------|----------|-------|--------|
| 1.0   |                 | 1.405   | 0.054 | 7      | 0.836   | 0.00000       | 0.00000  | 23    | 0.08   |
| 2.0   |                 | 1.546   | 0.054 | 3      | 0.594   | 0.00000       | 0.00000  | 12    | 0.04   |
| 3.0   | Gabapentin      | 3.785   | 0.115 | 1      | 1.065   | 0.00000       | 0.00000  | 6     | 0.02   |
| 4.0   | Baclofen        | 6.315   | 0.076 | 242    | 0.759   | 0.00000       | 0.00000  | 1155  | 3.98   |
| 5.0   | Pentoxifylline  | 8.261   | 0.059 | 1263   | 0.905   | 4.05347e-5    | 3.11033  | 4644  | 15.99  |
| 6.0   |                 | 8.781   | 0.065 | 124    | 0.911   | 0.00000       | 0.00000  | 528   | 1.82   |
| 7.0   | Clonidine       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000  | 0     | 0.00   |
| 8.0   | ketoprofen      | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000  | 0     | 0.00   |
| 9.0   |                 | 10.245  | 0.068 | 175    | 0.891   | 0.00000       | 0.00000  | 753   | 2.59   |
| 10.0  | Gabapentin RC   | 10.460  | 0.065 | 40     | 0.930   | 0.00000       | 0.00000  | 166   | 0.57   |
| 11.0  | Flurbiprofen    | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000  | 0     | 0.00   |
| 12.0  | Ibuprofen       | 11.564  | 0.070 | 482    | 0.670   | 8.61798e-5    | 3.04826  | 2141  | 7.37   |
| 13.0  | Diclofenac      | 11.772  | 0.055 | 2298   | 0.808   | 3.31767e-5    | 4.46159  | 8139  | 28.03  |
| 14.0  | Ketamine        | 12.317  | 0.055 | 2295   | 0.910   | 7.39912e-5    | 9.21583  | 7538  | 25.96  |
| 15.0  | Triclosan       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000  | 0     | 0.00   |
| 16.0  | Lidocaine       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000  | 0     | 0.00   |
| 17.0  | Verapamil       | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000  | 0     | 0.00   |
| 18.0  | Bupivacaine     | 13.660  | 0.057 | 349    | 0.930   | 0.00000       | 0.00000  | 1298  | 4.47   |
| 19.0  | Cyclobenzaprine | 14.272  | 0.063 | 649    | 0.901   | 3.87244e-5    | 1.68494  | 2633  | 9.07   |
| 20.0  | Amitriptyline   | 0.000   | 0.000 | 0      | 0.000   | 0.00000       | 0.00000  | 0     | 0.00   |
| total |                 |         |       |        |         |               | 21.52094 | 29035 | 100.00 |