

### 3.7 Stability of drugs in analytical solution

It is important to know at which level the analyte solution are stable. This was evaluated by determining the concentrations of the analytical solutions (standard and sample) stored for 24 hours at 4°C and room temperature in comparison to freshly prepared standard solutions. Analytical concentration (1.25 mg/ml) was prepared in diluent and plasma and analyzed in duplicate. The % recovery was between 98-102% in all stored conditions in two different matrices; diluent and plasma (Table 3.19, 3.20).

Table 3.19. Stability for amlodipine, glimepiride and atorvastatin in diluent solution

| Drug         | Time and Temp.        | Assay% | RSD  |
|--------------|-----------------------|--------|------|
| Amlodipine   | Standard fresh sample | 100.6  | 0.04 |
|              | 24 hours at 4C        | 101.1  | 0.52 |
|              | 24 hours at 25C       | 101.9  | 0.11 |
| Glimepiride  | Standard fresh sample | 99.3   | 0.10 |
|              | 24 hours at 4C        | 100.2  | 0.41 |
|              | 24 hours at 25C       | 98.4   | 0.13 |
| Atorvastatin | Standard fresh sample | 100.4  | 0.05 |
|              | 24 hours at 4C        | 100.6  | 0.22 |
|              | 24 hours at 25C       | 99.3   | 0.32 |

Table 3.20. Stability for amlodipine, glimepiride and atorvastatin in plasma

| Drug         | Time and Temp.        | Assay% | RSD  |
|--------------|-----------------------|--------|------|
| Amlodipine   | Standard fresh sample | 100.9  | 0.05 |
|              | 24 hours at 4C        | 101.6  | 0.77 |
|              | 24 hours at 25C       | 99.9   | 0.11 |
| Glimepiride  | Standard fresh sample | 100.3  | 0.05 |
|              | 24 hours at 4C        | 101.6  | 0.41 |
|              | 24 hours at 25C       | 99.2   | 0.16 |
| Atorvastatin | Standard fresh sample | 99.2   | 0.40 |
|              | 24 hours at 4C        | 98.5   | 0.38 |
|              | 24 hours at 25C       | 99.0   | 0.06 |