**The legend for figures**

Fig. 1. Solubility of Midazolam in phosphate buffers versus RM-β-CD concentration

Fig. 2. HPLC chromatograms showing the peak of midazolam, M, after 8 hrs photodegradation (a) in the absence and (b) in the presence of RM-β-CD and the peaks of degradants **A, B** and **C**.

Fig. 3. Mass spectrum of (a) degradant **A** with the M + 1 peak at *m/z* 289, (b) degradant **B** with the M+1 peak at *m/z* 273, and (c) degradant **C** with the M + 1 peak at *m/z* 358, and (d) a degradant M + 1 peak at *m/z* 574.9.

Fig. 4. Proposed model of the RM-β-CD-MDZ inclusion complex.

0.005

0.010

0.015

0.020

0.025

0.030

0.035

Midazolam / mol L-1

0

0.05

0.1

0.15

0.2

0.25

0.3

RM-β-CD / mol L-1

pH 5.0

pH 5.8

Fig. 1. Solubility of Midazolam in phosphate buffers versus RM-β-CD concentration

|  |  |
| --- | --- |
| (a) |  |
| (b) |  |

Fig. 2. HPLC chromatograms showing the peak of midazolam, M, after 8 hrs photodegradation (a) in the absence and (b) in the presence of RM-β-CD and the peaks of degradants **A, B** and **C**.

|  |  |  |  |
| --- | --- | --- | --- |
| (a) |  | (c) |  |
| (b) |  | (d) |  |

Fig. 3. Mass spectrum of (a) degradant **A** with the M + 1 peak at *m/z* 289, (b) degradant **B** with the M+1 peak at *m/z* 273, and (c) degradant **C** with the M + 1 peak at *m/z* 358, and (d) a degradant M + 1 peak at *m/z* 574.9.



Fig. 4. Proposed model of the RM-β-CD-MDZ inclusion complex.

TABLE I. Retention times, M + 1 peak values and proposed structures of photodegradants.

|  |  |  |
| --- | --- | --- |
| Retention time / min | M + 1 | Proposed structure |
| 5.5 | 342 | (1) or (2) |
| 6.0 | 289 | (3) |
| 6.5 | 343 | (4) |
| 8.3 | 575 | (8) |
| 8.7 | 358 | (4) |
| 17.2 |  | (5) |

TABLE II. UV λmax values of degradants **A,** **B** and **C**

|  |  |  |
| --- | --- | --- |
| Degradant | λmax/ nm | |
| Experimental | Literature values  (Andersin et al., 1994)13 |
| A | 229  318 | 230  318 |
| B | 230  327 | 206  230  326 |
| C | 215  333 |  |