Figure 1. Cross section of glipizide bead
Figure 2: Effect of the amount of binder/disintegrant layer on glipizide release from F2, F3, and F4 compressed at 1500 pounds, 100 rpm paddle speed. Key: ○ F2, with 11.11% weight gain of binder/disintegrant layer; ● F3, with 16.67% weight gain of binder/disintegrant layer; ▲ F4, with 22.22% weight gain of binder/disintegrant layer; ■ Glucotrol® XL tablets.
Figure 3: Effect of the amount of incorporated HPMC on glipizide release from beads-compressed into tablets compressed at 1500 pounds, 100 rpm paddle speed. Key: ● F4 formulation (6.82%); □ F5 formulation (4.55%); ○ F6 formulation (3.64%); ▲ F7 formulation (2.27%); ■ Glucotrol® XL tablets.
Figure 4: Effect of increasing amounts Surelease on glipizide release from beads-compressed into tablets compressed at 1500 pounds, 100 rpm paddle speed. Key: □ F8 formulation; ○ F9 formulation; ● F10 formulation; △ F11 formulation; • F12 formulation; ▲ F13 formulation; ■ Glucotrol® XL tablets.
Figure 5: Effect of compression pressures on glipizide release from beads-compressed into tablets, 100 rpm paddle speed. Key: ● F4, 1000 pounds (lbs) of compaction pressure; □ F4, 1500 lbs; ▲ F4, 2000 pounds (lbs); ■ Glucotrol® XL tablets.
**Figure 6:** Effect of paddle speeds on glipizide release from beads-compressed into tablets, F13, 1500 lbs, 110% glipizide, 50-200 rpm paddle. Key: ◇ F13, 50 rpm; ● F13, 100 rpm; ○ F13, 150 rpm; □ F13, 200 rpm; ■ Glucotrol® XL tablets, 100 rpm.
Figure 7: Effect of paddle speeds on glipizide release from F13, 2000 lbs. Key: ○ F13, 2000 lbs, 50 rpm; □ F13, 2000 lbs, 100 rpm; △ F13, 2000 lbs, 150 rpm; ◇ F13, 2000 lbs, 200 rpm; ● Glucotrol® XL tablets, 50 rpm; ■ Glucotrol® XL tablets, 100 rpm; ▲ Glucotrol® XL tablets, 150 rpm; ● Glucotrol® XL tablets, 200 rpm.
Figure 8: Effect of paddle speeds on glipizide release from F13, 3000 lbs. Key: ○ F13, 3000 lbs, 50 rpm; □ F13, 3000 lbs, 100 rpm; △ F13, 3000 lbs, 150 rpm; ▲ F13, 3000 lbs, 200 rpm; ● Glucotrol® XL tablets, 50 rpm; ■ Glucotrol® XL tablets, 100 rpm.
Figure 9: Effect of HPMC layer in hardening layer on glipizide release at 100 rpm paddle. Key: ▲ F13 tablets with 1500 lbs compression of pressure; △ F13 beads only; ○ F14 tablets with 1500 lbs compression of pressure; ● F14 beads only.