

Stability investigations during formulation findings for the clinical phases I–III, which provide specific information regarding the influence of excipients and the overall formulation on organoleptic, physicochemical, chemical, and microbial stability.

For phase II

Minimum shelf life for clinical phase I: prediction and confirmation.

For phase III

Minimum shelf life for clinical phases I and II: prediction and confirmation.

It is an important fact that the predicted minimum shelf lives will always be confirmed by the concurrently performed long-term tests.

Table 8 Reaction Kinetics Extrapolation

| Clinical phase | Storage condition | Decomposition found/ extrapolated decomposition (%) | | | | | |
|----------------|-------------------|--|-------|------|------|------|------|
| | | | | | | | |
| I | 40°C: 1.5 months | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 1.00 |
| | 25°C: 3 months | <0.10 | <0.10 | 0.12 | 0.16 | 0.20 | 0.40 |
| I | 40°C: 3 months | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 1.00 |
| | 25°C: 6 months | <0.10 | <0.10 | 0.12 | 0.16 | 0.20 | 0.40 |
| II | 60°C: 3 months | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 1.00 |
| | 25°C: 12 months | <0.10 | 0.18 | 0.27 | 0.35 | 0.44 | 0.89 |
| | 25°C: 18 months | 0.13 | 0.27 | 0.40 | 0.53 | 0.66 | 1.30 |
| II | 40°C: 6 months | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 |
| | 25°C: 12 months | <0.10 | <0.10 | 0.12 | 0.16 | 0.20 | 0.40 |
| | 25°C: 18 months | <0.10 | 0.12 | 0.18 | 0.24 | 0.30 | 0.60 |
| III | 70°C: 3 months | 0.50 | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 |
| | 25°C: 24 months | <0.10 | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 |
| | 25°C: 36 months | <0.10 | 0.15 | 0.30 | 0.45 | 0.60 | 0.76 |

2.11. Stability Information

All the results and the stability information derived therefrom are compiled in a stability report.

This contains

The batch information

The results

A critical assessment of the analytical procedures and of the results

The minimum shelf life

Storage instructions if necessary

Usually for each clinical phase a stability report is written.

Stability report:

Stress Testing and Long-Term Testing

Phase I

Phase II

Phase III