

Shelf Life

Effect of Storage on the Vitamin Levels of a Pelleted LabDiet® Guinea Pig Diet 5025 (2007)

LabDiet® Guinea Pig Diet, 5025, was stored at 72° F and 50% relative humidity for 0, 90 and 270 days post manufacturing. Vitamin content was assayed. Retention of assayed vitamins is recorded in Tables 1 and 2.

There was considerable analytical variation which accounts for the apparent increase in certain vitamins over time. For instance, recovery of B₁₂ was 85% at 90 days post manufacturing but 100% at 270 days post manufacturing (Table 1). Although a gradual decrease in L-Ascorbyl-2-Polyphosphate over time, after 270 days of storage vitamin C was in sufficient quantities to meet the guinea pig's minimal vitamin C requirements (200 ppm; Table 2).

Despite the analytical variation, results indicate little loss of nutrients occurs during 9 months of storage at 72° F and 50% or less relative humidity. These results are typical of what can be expected after storage of most pelleted LabDiet® animal diets.

Table 1. Retention (%) of vitamins in LabDiet® 5025 stored at 72° F for 0, 90 and 270 days post manufacturing.

Vitamin	Days, post manufacturing		
	0	90	270
A	100	74	76
D	100	100	100
E	100	100	100
Thiamin HCL	100	93	100
Riboflavin	100	100	77
Pyridoxine	100	93	97
Niacin	100	100	100
Pantothenate	100	97	98
Choline	100	97	98
Folate	100	94	100
Biotin	100	93	85
B ₁₂	100	85	100

Table 2. Retention (%) of L-Ascorbyl-2-Polyphosphate (Source of Vitamin C) in LabDiet® 5025 stored at 0, 90 and 270 days post manufacturing.

Day	Retention (%)	Dietary vitamin C, ppm
0	100	772
90	97	749
270	79	607