ASBC Approved Methods Hops – 6A

A. α- and β-acids by spectrophotometry
(a) dilution factor, *d*

$$= \frac{\text{vol dil. A (ml)} \times \text{vol dil. B (ml)}}{500 \times \text{aliq. extract (ml)} \times \text{aliq. dil. A (ml)}}$$

where "500" arises from $\frac{100\text{ ml extract} \times 100\,(\%)}{5\text{ g sample} \times 1{,}000{,}000\,(\text{g/ml to mg/L})}$

(b) α-acids, % $= d \times (-51.56A_{355} + 73.79A_{325} - 19.07A_{275})$

(c) β-acids, % $= d \times (55.57A_{355} - 47.59A_{325} + 5.10A_{275})$

α- and β-acids by Spectrophotometry

0.615	A_{355}
0.596	A_{325}
0.132	A_{275}
0.667	*d* = Dilution factor

Calculate Reset

Result

6.50	α-acids, %
4.3	β-acids, %

(a) $d = \frac{100 \times 50}{500 \times 5 \times 3} = 0.667$

(b) α-Acids, %
= 0.667 × [(–51.56 × 0.615) + (73.79 × 0.596) – (19.07 × 0.132)]
= 6.50
= 6.5

(c) β-Acids, %
= 0.667 × [(55.57 × 0.615) – (47.59 × 0.596) + (5.10 × 0.132)]
= 4.33
= 4.3