

while AA-12623 has a sample content of .8345 which also represents 1,686 years before the present.

There is considerable difference between .8130 and .8345 and this may be shown by using the equation for the half-life of Carbon-14. The most accurate half-life for Carbon-14 is 5,715 years.¹ The equation for this is $5715 = 18985 \text{ of } \log 1.0000/.5000$. This equation tells us that when any ancient organic sample C-14 content is measured and this value is placed in the equation's denominator this can be compared to the same type of sample's modern present-day C-14 value which is placed in the equation's numerator. The mathematics are now performed to render the number of years before the present which is how old the ancient organic sample is. We must use the C-14 half-life equation to show the historical difference between different C-14 contents. When this is done the higher C-14 value must always be placed in the equation's numerator and the lower C-14 value in the equation's denominator. We use this equation to compare AA-10926 with .8130 C-14 content and AA-12623 with .8345 C-14 content. We use our equation and $215.2 = 18985 \text{ of } \log .8345/.8130$. The C-14 content indicates a difference of 215 years for two same-age manuscripts, the difference between them being: one is animal skin and the other is plant material. This is significant!

Clearly, the specific properties of different materials need to be taken into account, as the initial C-14 content of animal skin and Papyrus are different in value.

¹ Chemical Rubber Company Handbook of Chemistry and Physics, 73rd ed. 1992-1993, p. 11-29.