Answer on Question #46519 - Chemistry - Other

Question

i. 10 g of sugar added to 100 g of coffee

ii. 10 g of sugar added to 200 g of coffee

iii. 4 g of sugar added to 200 g of coffee

iv. 4 g of sugar added to 100 g of coffee

Based on the amount of sugar added, which sequence ranks the coffee from the sweetest coffee to the least-sweet coffee?

i, ii , iii, iv

iii, iv, ii, i

iv, i, ii, iii

i, ii, iv, iii

Answer:

To compare, which coffee is the sweetest, we divide masses coffee in ii and iii by 2 to know how much sugar there are per 100 g of coffee:

ii. 10 g of sugar added to 200 g of coffee means 5 g of sugar per 100 g of coffee

iii. 4 g of sugar added to 200 g of coffee means 2 g of sugar per 100 g of coffee

So we have:

i. 10 g of sugar per 100 g of coffee

ii. 5 g of sugar per 100 g of coffee

iii. 2 g of sugar per 100 g of coffee

iv. 4 g of sugar per 100 g of coffee

We see that the sweetest coffee is i as it has the biggest amount of sugar per 100 g of coffee, then ii, iv, iii.

Answer: the coffee from the sweetest coffee to the least-sweet coffee: i, ii, iv, iii