*Unfortunately, the Final Jeopardy Question that I made up on the spot yesterday was faulty. There was too much information, leading to two possible answers.*

So those of you who lost points have been refunded, and all 4 qualifying teams have to replay it.

You and your teammates have until the end of lunch to hand in the answer to this new question. Respect sig figs and your grandmother.

2 H2O2(l)🡪2 H2O(l) + O2(g)

A 3.00 % m/V H2O2(l) solution, like the one you buy at the pharmacy, is decomposing quickly in the presence of KI. At 25.0 C and 101.3 kPa , you measure an average rate of 4.00 ml/s of oxygen production over a short time period.

In 5.00 minutes, how many ml of hydrogen peroxide *solution* decomposed?

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| --- | --- | --- | --- |
| 2- Terrika Kandasamy, Alex Marchand, Anais, Nick T, Abhiraamy | 3- Sean Z, Vito, Leo Scordos, Michael D, George L., | 5- Ammar Rudani, Thomas, Shaun W, Elanie, Jumal | 6- Dian Gutierrez, Phillips Ian, Rudith, Paulina |
| 1200 | 1400 | 2100 | 1300 |

% m/V = (mass of pure compound in grams) / 100.0\* ml volume of solution ---- it’s actually exactly 100, by definition.

n = PV/(RT) = 101.3 kPa(0.0040 L)/[(8.31 LkPa)(298 K)

= 0.0001636259379 moles of oxygen

0.0001636259379 moles O2(g) /s (2 H2O2(l)/1 O2(g) ) = 0.0003272518758 moles H2O2(l)

0.0003272518758 moles H2O2  /s \* 5.0 min\*60 s = 0.09817556274 moles

 0.09817556274 moles \* 34.0147 g/mol = 3.339412314 g H2O2

 3.339412314 g H2O2 (100 ml of solution)/3.0 g = 111 mL