Heat of formation of mgo lab answers

Looking at Laboratories May Have Laboratories, Heat of Reactions for Training in Magnesium Oxide. Can we help with your spots? Let us do your homework! Professional writers in all subject areas available and will meet your assignment deadlines. Free editing and copy-editing included. Planning B: Refers to laboratories entitled, in Reaction to Training of Magnesium Oxide. Data Collection: Quantitative Table I: Compound Trial Mass±0.001g Volume of HCl±0.5mL Temperature of HCl±0.5°C Time (seconds) Temperature of solution±0.5°C MgO 1 1.020 100.0 21.0 23.0 15 27.0 30 30.0 45 30.0 60 30.0 75 30.0 90 30.0 2 1.078 99.0 21.0 23.0 15 27.0 30 29.0 45 29.0 60 29.0 75 29.0 90 29.0 25.0 Mg 1 0.542 99.0 22.0 15 31.0 30 41.0 45 45.0 60 46.0 75 46.0 90 46.0 105 45.0 2 0.532 99.0 20.0 21.0 15 32.0 30 40.0 45 43.0 60 44.5 75 44.5 90 44.5 105 44.5 120 44.5 Qualitative Table I: Compound Before During After MgO MgO is small, white granular pieces, a fine white powder. HCL is clear and has a slight curtain. Pretty source of smell. Fizing Steaming. A gas starts to form, only slightly. Feel the solution getting hot while experiencing. Very spirited. The MgO is completely dissolved in the HCl. The new solution is clear and odourless despite the previous verdo in the HCl Mg Mg is little rough as the shiny rock HCl is clear and has a slight ordo. Pretty source of smell. Fizing Steaming. A lot of gas will form. Feel the solution getting very warm while experiencing the show. Incredibly existent. Many bullets are formed. The bad first odo was born as the Mg and HCl mixed. The Mg completely dissolved in the HCl. The new solution is clear. There is a very loud and bad odo. Almost center like rotting eggs but not as strong. Data Analysis: Therefore, the high average temperature for the MgO and HCl solution in trial 1 was 30.0^{o}C. therefore the high average temperature for the MgO and HCl solution of trial 1 was 46.0^{o}C. Therefore, the average high temperature for the MgO and HCl solution of trial 2 was 29.0^{o}C. Therefore, the average temperature for the MG and HCl solution of trial 2 was 44.5^{o}C. Data Process: Dispute: This investigation was conducted in order to determine the haunted of training for Magnesium oxide by manipulation of the three equations provided. Through experience it has found that the analysis of changes for the combination of magnesium is -593.3KJ/mol and that the thermal chemical equation (target equation) for the combination of magnesium is (see right). It is obvious that the two equations that were used in this experience have been abnormal since the healthy of changes resulting in a negative value, therefore the experience was successful. Furthermore, the results are quite accurate as the value reached the experiment, -24410.6 KJ/Kg, is very close to the theoretical value, -25020KJ/Kg, which is seen in the low percent error of only 2.4%. Since the percent error is a very small value is obvious that the experience was a success, however this doesn't mean that it was perfect. The sources of errors in this case would have been quite minimal resulting in slight changes that led to a slightly lower value than the expected value. An error that may have caused a lower analyst to value changes than expected could escape from the calorometer used during the experiment. There were two holes on the cover of the calories and one was used for the thermometer, however the second, although little, was left. These holes could leave heat saved as the reaction took place that would lower the value of final temperature. What's more, is that the lid wasn't as tight as it could since it was simply meters on the container being used as a calorometer and not being when tight, which also could leave some heat escaped. Both of those conditions would have led to a lower final temperature value. Consequently, the heat value, or Q, would have been lower which would have also led to a lower anthalpy value, such as the one that was found. However, due to the small hole sizes and safety of the cover it is unlikely that a large amount of heat would escape which is why only a minimum change would happen, much like in this case of experience. To prevent even the sliver abnormalities, in future any holes on the calorium can be covered by tape or another item that could block the passage. The top of the calorie could also be covered with aluminum, this would not only cover the holes, but would secure the space under the lid for any heat that can be saved would remain in the area due to the aluminum. Aluminum could be jammed into the space between the lid and the calorium once again close the heat in. That way, the caloriem will be more efficient and keep all the heat of the reaction causing the fully accurate values and reducing even the lighter errors. Another disagree that may have been during the experiment was that the magnesium terrain may have reacted with the oxygen to the air before it poured into the calorium. This would be only specific to the magnesium as the magnesium oxide has already reacted with oxygen and no further reaction would occur. The procedure for the experience making state that the HCl is to be measured first and then the magnesium, the importance of this stage does not highlight and so in a group of, such as the one for that experience, the step would be broken into two parts as one magnesium sleeve partner with the other HCl handle. So as the magnesium was carried out in the measuring area of the work or while it was sitting on the counter or being poured in, it could have reacted with the oxygen in the atmosphere and combined. Consequently, this would have led to a decrease in the mass of the magnesium, one that would have been unknown at the moment. This would have led to a lower value for the reaction and when the calculation for the heat (Q) being the lowest temperature value would have led to a lower value for the heat of reaction, since it is calculated using Q=mc. Once again, the change that would have happened would have been scarce as it is difficult for large amounts of magnesium to react with oxygen in such a short amount of time without the use of a catalyst. However, this would explain the small error in this experience as the costs were not that high. In the future the procedure would highlight the importance of measuring and draining the magnesium after the HCl was measured and poured into the calorium, this would prevent other reactions from partying. The electronic balance, or any balance, should be placed in the work station and as soon as the right amount of magnesium was measured out it would be poured into the calorium immediately. The probability of a designed reaction would definitely decrease as the calorie and balance would be in proximity to one another. The final mistake that may have been made during the experience was the loss of heat during the draining stage. It is obvious that their reaction all started immediately, seeing as being very short, between a 90-120 seconds. This means that heat was produced immediately and the lid was not on the calories to keep the heat from escaped. Once again, the loss of heat would have resulted in a lower fingerprint value. In the future, to prevent this, the non-draining magnesium partner should keep the lid close to the calorium and only open it to a small angle so that there is just enough space for the other partner poured into the magnesium or magnesium oxide. Once it is all poured into the cover should be broken down immediately. Although this doesn't completely stop heat from escaping it certainly decreases the amount that can escape. Therefore, the disagreition of the experiment, however small, could lead to a lower value than expected resulting in percent of low errors. Looking at Laboratories May Have Laboratories, Heat of Reactions for Training in Magnesium Oxide. Can we help with your spots? Let us do your homework! Professional writers in all subject areas available and will meet your assignment deadlines. Free editing and copy-editing included. Planning B: Refers to laboratories entitled, in Reaction to Training of Magnesium Oxide. 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