

Eldon E. Harmon (“Harmon”) was convicted in Elkhart Superior Court of Class A felony dealing in methamphetamine by manufacturing. Harmon appeals and raises two issues, one of which we find dispositive: whether the state presented sufficient evidence to establish that Harmon manufactured at least three grams of methamphetamine. We reverse and remand with instructions.¹

Facts and Procedural History

On the evening of October 4, 2009, Cheyenne Fisher (“Fisher”) drove to Harmon’s residence in Elkhart County. Once there, Fisher asked Harmon whether he had any methamphetamine. Harmon responded that he did not have any methamphetamine, and Fisher stated that if he could obtain a box of pseudoephedrine, he could manufacture the drug. Harmon and Fisher then left Harmon’s residence and purchased three boxes of pseudoephedrine from three separate stores. Some time later, Harmon and Fisher drove to a friend’s house, where they manufactured methamphetamine in the garage. After successfully completing a batch of methamphetamine, Fisher gave Harmon some of the finished product and kept some for himself. Fisher then placed the items he and Harmon had used to manufacture the drug into the trunk of his car. In the early morning hours, Fisher and Harmon returned to Harmon’s residence where they both smoked methamphetamine.

¹ We heard oral argument on this cause on May 21, 2012, at Garrett High School in Garrett, Indiana before an audience of students, faculty, and members of the DeKalb County Bar Association. We commend counsel for their superb oral advocacy, and we thank the students and school personnel for their hospitality. We also thank the DeKalb County Bar Association for hosting a pre-argument luncheon at the Auburn Cord Duesenberg Museum in Auburn, Indiana. Finally, we thank all audience members for their attention and thoughtful post-argument questions concerning Indiana’s judicial system.

Later that morning, Fisher's girlfriend, Sonya Sandefur, showed up at Harmon's residence and tried to persuade Fisher to come home with her. Sandefur detected an odor coming from the house that she associated with the manufacturing of methamphetamine, and Fisher admitted to her that he had been "cooking meth" the night before. Tr. p. 335. Sandefur became angry and called the police because she did not want Fisher to drive while under the influence of methamphetamine. While Sandefur was on the phone, Harmon and Fisher got into Fisher's car and left. As he was driving away, Fisher spotted a police car. Fisher then pulled the car into a driveway, tossed the keys to Harmon, and took off running. An officer pursuing Fisher saw Fisher throw several plastic baggies. After apprehending Fisher, officers recovered the baggies and determined that two of them contained methamphetamine.

Police subsequently conducted a search of Fisher's car. The police recovered numerous items used to manufacture and ingest methamphetamine from the trunk of the car, including three empty boxes of pseudoephedrine, cold packs, lithium battery strips, a jar of lye, a bottle of Liquid Fire, cut straws and pen casings, and aluminum foil. Officers also located four coffee filters that contained a white or pink powder, which field-tested positive for methamphetamine. Officers also found three vessels in the trunk, a red thermos, inside of which was a gallon-sized plastic freezer bag containing blue liquid, and two plastic bottles, one containing a blue liquid covering an off-white sludge, and one containing a clear liquid covering the same type of off-white sludge. Samples of the liquid taken from each vessel later tested positive for the presence of methamphetamine. As a result of these events, the State charged Harmon with Class A felony dealing in

methamphetamine by manufacturing. The charge was elevated from a Class B felony based on the State's allegation that Harmon had manufactured three grams or more of the drug.

At trial, Fisher testified that he and Harmon successfully manufactured 1.52 grams of methamphetamine, which they split between themselves, and then placed the items used to produce the methamphetamine in the trunk of his car. Fisher testified further that the methamphetamine he discarded while being pursued by the police was the amount remaining after he and Harmon smoked some of their finished product. The State presented evidence establishing that the total weight of the crystallized methamphetamine recovered from the scene was 1.34 grams. Specifically, the total weight of the methamphetamine in the plastic baggies Fisher threw while being pursued by police was 1.2 grams, and the total measured weight of the methamphetamine found on the coffee filters was 0.14 grams. Samples of liquid taken from each of the vessels described above were also admitted into evidence as State's Exhibits 15, 16, and 17. The liquid samples were determined by an Indiana State Police Laboratory chemist to contain methamphetamine; however, the chemist did not determine the weights of the samples because it is the laboratory's policy not to weigh liquids.

In order to establish the weight of the liquid samples and to satisfy the Class A felony element of three grams or more, the State was allowed, over Harmon's objection, to have Indiana State Trooper Aaron Campbell ("Trooper Campbell") conduct a demonstration comparing the weight of each sample to the weight of a vial containing three grams of artificial sweetener. Specifically, Trooper Campbell emptied three

packets of sweetener, each of which was labeled with a weight of one gram, into a vial similar to those containing the samples of liquid methamphetamine. The vial containing the sweetener was introduced into evidence for demonstrative purposes as State's Exhibit 39A.

Trooper Campbell then held State's Exhibit 39A in one hand and State's Exhibit 15 in the other hand and testified that the vials were of approximately equal weight. He repeated this process of comparison with State's Exhibits 16 and 17, and testified that each of them weighed approximately the same as State's Exhibit 39A. He testified further that the samples of liquid methamphetamine base admitted into evidence at trial were only a fraction of the liquid contained in the vessels. Trooper Campbell indicated that the sample taken from the thermos was a small portion of the liquid it contained, and he testified further that he could have taken ten to twenty samples of comparable size from each of the two plastic bottles before emptying them. Photos of the reaction vessels as they appeared on the date they were discovered were admitted into evidence at trial, but the vessels and their remaining contents were destroyed prior to trial due to safety concerns arising from the volatility of the chemicals involved in the manufacture of methamphetamine. After Trooper Campbell finished testifying, the members of the jury were permitted to examine the vials.

At the conclusion of the trial, the jury found Harmon guilty as charged. Harmon was sentenced to forty years, with thirty years executed and ten years suspended to probation. Harmon now appeals.

Discussion and Decision

Harmon contends that the State presented insufficient evidence to support his conviction for Class A felony dealing in methamphetamine. In reviewing a challenge to the sufficiency of the evidence, we neither reweigh the evidence nor judge the credibility of witnesses. Atteberry v. State, 911 N.E.2d 601, 609 (Ind. Ct. App. 2009). Instead, we consider only the evidence supporting the conviction and the reasonable inferences to be drawn therefrom. Id. If there is substantial evidence of probative value from which a reasonable trier of fact could have drawn the conclusion that the defendant was guilty of the crime charged beyond a reasonable doubt, then the verdict will not be disturbed. Baumgartner v. State, 891 N.E.2d 1131, 1137 (Ind. Ct. App. 2008).

Indiana Code section 35-48-4-1.1(a) provides that a person who knowingly or intentionally manufactures pure or adulterated methamphetamine is guilty of dealing in methamphetamine, a Class B felony. However, the offense is elevated to a Class A felony “if the amount of the drug involved weighs three (3) grams or more.” Ind. Code § 35-48-4-1.1(b)(1). Thus, the weight of the drugs is an essential element of Harmon’s Class A felony conviction.

On appeal, Harmon does not dispute that he knowingly or intentionally manufactured methamphetamine, a B felony offense with a range of possible sentences between six and twenty years. Harmon only disputes whether the State presented sufficient evidence to establish the weight element of the Class A felony offense, which carries a range of possible sentences between twenty and fifty years. Specifically, Harmon notes that because the crystallized methamphetamine introduced into evidence at

trial weighed only 1.34 grams, the State was required to present evidence establishing that Harmon manufactured another 1.66 grams of the drug. According to Harmon, because the State did not accurately establish the weight of the liquid methamphetamine base² found in the trunk of Fisher's car, the State failed to prove that the total weight of the drug was at least three grams.

Our supreme court addressed the manner in which the State may prove the weight element of a drug offense in Halsema v. State, 823 N.E.2d 668 (Ind. 2005). In Halsema, the defendants were charged with several drug offenses, including Class A felony possession of three grams of methamphetamine within one thousand feet of a school. Id. at 672-73. The State introduced no evidence at trial to establish the weight of the methamphetamine at issue, but argued on appeal that the jurors were able to examine the drugs and use their common sense and experience to determine whether the drugs weighed at least three grams.

Our supreme court disagreed, reasoning that while the jury may rely on its collective common sense and knowledge acquired through everyday experience, a juror's ability to determine the existence of a fact based on his or her common sense and experience is not unlimited. Id. at 673-74. The court reasoned further that a jury may not

² The evidence presented at trial established that the liquid methamphetamine base was not yet in consumable form; rather, it was an intermediate substance created during the process of manufacturing methamphetamine. At that particular step in the process, the liquid was a mixture of methamphetamine and other substances used to make the drug, such as ether and Coleman fuel. Before the drug could be ingested, it would need to go through another step in the manufacturing process in order to remove these substances and crystallize the drug into its consumable form. For the purposes of this opinion, we will assume (but we do not hold) that the entire weight of the liquid, and not just its pure methamphetamine content, may be considered in determining whether Harmon manufactured at least three grams of "pure or adulterated" methamphetamine. See Ind. Code § 35-48-4-1.1 (prohibiting the manufacture of "pure or adulterated" methamphetamine); Hundley v. State, 951 N.E.2d 575, 581 (Ind. Ct. App. 2011) (holding that where an "intermediate step [in the methamphetamine manufacturing process] is so near the end of the manufacturing process that the final product is present in the chemical compound, that substance qualifies as an 'adulterated drug' for purposes of our manufacturing statutes"), trans. denied.

infer the existence of a fact based solely on its in-court observations where the jury does not possess the knowledge or expertise necessary to make that inference. Id. at 674. The court went on to hold that “we are not persuaded that the weight of a given quantity of drugs, especially when expressed in a metric unit of measurement, is a matter of general knowledge and expertise.” Id. Rather, the court held that the matter of the weight of a given quantity of drugs is familiar only to those who regularly use or deal in the drug, those who enforce laws against it, or those who ““have developed an acute ability to assess the weight of objects down to the ounce[,]”” and that the ““average juror does not fall into any of these categories.”” Id. (quoting State v. Mitchell, 336 N.C. 22, 442 S.E.2d 24, 28 (1994)). Ultimately, the court held that the State may establish the weight element of a drug offense in one of two ways: (1) by offering evidence of the actual, measured weight of the drugs, or (2) by demonstrating that the quantity of the drugs is so large as to permit a reasonable inference that the element of weight has been established. Id.

Here, the State presented no forensic evidence establishing the actual, measured weight of Exhibits 15, 16, or 17, or the remaining contents of the three vessels. Instead, the State relied on Trooper Campbell’s in-court demonstration, in which Trooper Campbell compared the weight of Exhibit 39A, a vial holding the contents of three packets of artificial sweetener, to the weights of Exhibits 15, 16, and 17. Trooper Campbell testified that he believed each vial containing liquid methamphetamine base weighed approximately the same as the vial containing the sweetener, and the members of the jury were permitted to handle the vials and conduct their own comparisons.

This evidence was inadequate to establish the “actual, measured weight” of the vials. See Halsema, 823 N.E.2d at 674. First, as Harmon points out, although the labels on the sweetener packets apparently indicated that their contents weighed one gram, the State presented no evidence to establish the accuracy of the labels. And even if we assume that the sweetener packets were accurately labeled, we cannot conclude that either Trooper Campbell or the members of the jury were physically able to gauge the weight of the vial containing the sweetener versus the weight of the vials containing liquid methamphetamine base with sufficient accuracy to constitute proof beyond a reasonable doubt. As Harmon notes, Trooper Campbell and the jury were essentially permitted to act as “human scales” to determine the weight of the samples of liquid methamphetamine base—and there is simply no way to assess the accuracy of their conclusions. Moreover, Trooper Campbell was unable to testify that Exhibits 15, 16, and 17 each weighed precisely the same as Exhibit 39A. Rather, he indicated that Exhibit 15 weighed “probably close to the same” as Exhibit 39A, that Exhibits 16 and 39A were “approximately” the same weight, and Exhibits 17 and 39A “compared in weight.” Tr. p. 492. For all of these reasons, we hold that the State presented insufficient evidence to constitute proof beyond a reasonable doubt of the “actual, measured weight” of the liquid methamphetamine base. See Halsema, 823 N.E.2d at 674.

Nor can we conclude that the State introduced sufficient evidence to establish that the quantity of liquid methamphetamine base was so large as to permit a reasonable inference that the weight element of the charge had been established. See id. We acknowledge that Trooper Campbell testified that the vessels recovered from the trunk of

Fisher's car contained far more liquid methamphetamine base than that contained in Exhibits 15, 16, and 17—indeed, Trooper Campbell indicated that the sample taken from the thermos was only a “small portion” of the liquid it contained, and that he could have taken ten to twenty more samples from each of the two plastic bottles before draining them. Tr. pp. 489-91. But it should be noted that the samples contained in Exhibits 15, 16, and 17 are quite small; photographs of the exhibits show that each vial is less than half full. Accordingly, the fact that Trooper Campbell could have taken many more samples of comparable size does not necessarily establish that the vessels contained an especially large amount of methamphetamine base.

Nor do the photographs of the vessels introduced into evidence at trial support a conclusion that the amount of liquid methamphetamine was so great as to permit a reasonable inference that the weight element of the offense had been satisfied. State's Exhibit 38 depicts the two plastic bottles recovered from the trunk of Fisher's car. The bottles are the same size, and appear to be beverage containers. Both bottles are approximately half-full. The contents of both bottles consist of roughly equal portions of white or off-white powdery sludge and clear or blue liquid. State's Exhibit 39 depicts the thermos. The thermos is opaque, and part of a plastic freezer bag can be seen protruding from its top. However, due to the angle of the photograph, it is impossible to tell how much (if any) liquid the thermos and/or bag contains.

We acknowledge that in Halsema, our supreme court gave virtually no guidance as to just how much of a drug is required to establish that the quantity is large enough to permit a reasonable inference that the weight element of a drug offense has been satisfied

absent evidence of the drug's actual, measured weight. Although we decline to set forth a general rule concerning the threshold amount required to permit such an inference, we are not satisfied that the threshold was met here. Because the State failed to present evidence of the actual, measured weight of the liquid methamphetamine base or to demonstrate that the quantity of the liquid was so large as to permit a reasonable inference that the weight element of the offense had been met, pursuant to our supreme court's decision in Halsema, we conclude that the evidence is insufficient to support Harmon's Class A felony conviction.

The sole basis for elevating Harmon's offense from a Class B felony to a Class A felony was the weight of the drug. That is, to support the elevation, the State was required to prove beyond a reasonable doubt that Harmon manufactured at least three grams of methamphetamine. The General Assembly's insertion of a weight requirement into the Class A felony methamphetamine manufacturing statute requires the State to prove the weight of the drug with precision. But here, the State used an unreliable method to establish the weight element of the Class A felony offense. We acknowledge that, for reasons that are not readily apparent, the State Police Laboratory has a policy against weighing liquids.³ But there were other, scientific ways the State could have established the actual, measured weight of the samples of liquid methamphetamine base,

³ We further note, as discussed during oral argument, that there may be some question as to whether grams are an appropriate unit of measurement for liquids, in the first instance. Grams are a unit of mass and, of course, both solids and liquids have mass. However, the more common practice is to measure liquids in units of volume. Given the fact that reaction vessels containing liquid methamphetamine base, like those at issue in this case, are often found in methamphetamine laboratories, it may be prudent for our General Assembly to consider incorporating an alternative, volume-based measurement for such liquids into the methamphetamine manufacturing statutes.

such as conducting a courtroom demonstration using a balance or scale. Allowing Trooper Campbell and the jury to act as “human scales” was simply not good enough to constitute proof beyond a reasonable doubt. We believe that allowing the State to rely on such imprecise methods to establish the essential element necessary to elevate Harmon’s offense from a Class B to a Class A felony, thereby increasing his maximum possible sentence by thirty years, would be fundamentally unfair and undermine public confidence in our criminal justice system. See Ind. Code § 35-50-2-4 (providing that the maximum sentence for a Class A felony is fifty years); Ind. Code § 35-50-2-5 (providing that the maximum sentence for a Class B felony is twenty years).

Finally, we address the State’s argument that although police only recovered 1.34 grams of crystallized methamphetamine, based on the evidence presented at trial, the jury could have reasonably inferred that Harmon and Fisher’s manufacturing activities yielded more than three grams of the finished product. According to the State, the following evidence, when taken together, supports such an inference: (1) Fisher’s testimony that he and Harmon used one box of pseudoephedrine to manufacture 1.52 grams of methamphetamine, (2) the evidence that Fisher and Harmon actually purchased and used three boxes of pseudoephedrine, (3) Fisher’s admission that he and Harmon conducted “two cooks” of methamphetamine, and (4) the discovery of more than one reaction vessel in the trunk of Fisher’s car. According to the State, this evidence supports a reasonable inference that *each* “cook” must have yielded 1.52 grams of methamphetamine, more than enough to satisfy the three-gram threshold necessary to support a Class A felony conviction. We disagree.

As a general matter, a conviction may rest on circumstantial evidence alone. See Gambill v. State, 675 N.E.2d 668, 674 (Ind. 1996). But, as we explained above, in Halsema, our supreme court held that the weight element of a drug offense may be established in one of two ways: either by admitting evidence of the actual, measured weight of the drug, or by demonstrating that the amount of drugs is so large as to permit a reasonable inference that the weight element has been satisfied. See Halsema, 823 N.E.2d at 674. We have already concluded that the State presented insufficient evidence to satisfy either standard with respect to the liquid methamphetamine base. The State's arguments concerning the amount of drugs it believes Harmon and Fisher could have or must have manufactured are likewise insufficient under Halsema.

Moreover, we believe that the State's inference that Harmon must have manufactured more than three grams of crystallized methamphetamine stretches reason beyond its breaking point. At oral argument, the State made much of Fisher's testimony that he and Harmon used one box of pseudoephedrine to produce 1.52 grams of methamphetamine and that they carried out two methamphetamine cooks. The State relied on this testimony to argue that each cook must have yielded 1.52 grams. But the State misconstrues Fisher's testimony. During trial, Fisher and the prosecutor engaged in the following exchange:

Q: How many cooks did you do that night?

A: Just one.

Q: But you indicated that both of the reactionary vessels in your trunk were from that night.

A: Yes.

Q: And there were two of them.^[4]
A: Yes.
Q: But you only cooked once.
A: Yeah.
Q: *Where did the other reactionary vessel come from?*
A: *Just cooking both at the same time.*
Q: *Okay. So you did two cooks that night.*
A: *If you want to call it two cooks.*
Q: So there were two reactionary vessels?
A: Yes.

Tr. pp. 364-65 (emphasis added).

It is clear from the above testimony that Fisher was initially referring to the entire methamphetamine manufacturing transaction as a single “cook,” which yielded 1.52 grams of the drug. It was the prosecutor who referred to each individual reaction vessel as a separate cook, and Fisher merely assented to the prosecutor’s characterization. But this does not change Fisher’s testimony that he and Harmon only used one box of pseudoephedrine and the total yield of methamphetamine was 1.52 grams. Indeed, when asked whether he “only produced 1.5 grams,” Fisher responded affirmatively. Tr. p. 428. Whatever the import of the discovery of two additional empty pseudoephedrine boxes in the trunk of the car, Fisher’s testimony cannot be reasonably understood to support a conclusion that the total yield of finished methamphetamine was at least three grams.

And even if we assume that Fisher’s testimony could support a reasonable inference that the 1.52 grams of methamphetamine he testified to splitting with Harmon was the product of only one of the reaction vessels, there is no evidence or testimony

⁴ At trial, it appears that the State only referred to the two plastic beverage bottles containing the powdery sludge and liquid methamphetamine base as “reaction vessels.” At oral argument, the State did not seem to draw the same distinction between the plastic bottles and the thermos. Regardless of whether there were two or three reaction vessels, we conclude that the evidence is insufficient to support an inference that Harmon manufactured at least three grams of finished, crystallized methamphetamine.

establishing the weight of any methamphetamine derived from any other reaction vessel or indicating that using the additional pseudoephedrine in other reaction vessels would necessarily yield the same or a similar amount of methamphetamine. Any such conclusion on the part of the jury would be pure speculation. For all of these reasons, we conclude that the State's string of inferences is simply too tenuous to satisfy its burden of proof beyond a reasonable doubt with respect to the weight element of the Class A felony charge.

Notwithstanding the State's failure to present sufficient evidence to prove Class A felony dealing in methamphetamine, we note that the jury was also instructed on the lesser-included offense of Class B felony dealing in methamphetamine. Specifically, the jury was instructed as follows:

If you find that the State proved beyond a reasonable doubt that the defendant knowingly manufactured methamphetamine and that the amount of the drug involved weighed three (3) grams or more, you should find the defendant guilty of Dealing in Methamphetamine, a Class A felony. If you find that the State of Indiana proved beyond a reasonable doubt that the defendant knowingly manufactured methamphetamine but that amount of the drug involved weighed less than three (3) grams, you should find the defendant guilty of Dealing in Methamphetamine, a Class B felony.

Tr. p. 532. The only difference between the Class A and the Class B felony offenses is that in order to prove the Class A felony, the State must prove that the weight of the drugs was at least three grams. Accordingly, in finding Harmon guilty of the Class A felony, the jury necessarily concluded that Harmon committed the Class B felony. The evidence presented at trial was clearly sufficient to support a Class B felony conviction, and Harmon concedes as much on appeal. See Appellant's Br. at 9-10 ("The Class A

felony conviction must be vacated and this cause should be remanded to the trial court with instructions to enter a conviction for a Class B felony and to re-sentence Harmon accordingly.”). We therefore reverse Harmon’s conviction for Class A felony dealing in methamphetamine and remand to the trial court with instructions to enter a conviction for Class B felony dealing in methamphetamine and to resentence Harmon accordingly.

Reversed and remanded with instructions.

VAIDIK, J., concurs in result with opinion.

BARNES, J., concurs.

**IN THE
COURT OF APPEALS OF INDIANA**

ELDON E. HARMON,)	
)	
Appellant,)	
)	
vs.)	No. 20A03-1110-CR-529
)	
STATE OF INDIANA,)	
)	
Appellee.)	
)	

VAIDIK, Judge, concurring in result.

I concur in full with the majority opinion that the State presented insufficient evidence to establish that Harmon manufactured at least three grams of methamphetamine.

I write separately to address the issues with determining generally the amount of methamphetamine that is involved in the manufacturing in a particular case. When the manufacturing process is complete and the methamphetamine is in either a pure or adulterated state, there is not an issue in determining the weight; the methamphetamine is in its final form and the drug can easily be weighed.

Issues arise, however, when the manufacturing process has not been completed and the methamphetamine is still mixed in with liquid ingredients. Varying methods have been used to determine the actual weight of the methamphetamine produced in this

situation; one of those methods is weighing the solid methamphetamine and the liquid ingredients used in the manufacturing process together. *Hundley v. State*, 951 N.E.2d 575 (Ind. Ct. App. 2011), *trans. denied*; *Traylor v. State*, 817 N.E.2d 611 (Ind. Ct. App. 2004), *trans. denied*. Another method is determining the amount of methamphetamine that will be produced using a conversion ratio based on the amount of ephedrine or pseudoephedrine that is present. *Halferty v. State*, 930 N.E.2d 1149, 1153 (Ind. Ct. App. 2010), *trans. denied*.⁵

The majority assumes, but does not hold, that the entire weight of the liquid can be considered when determining the weight of the methamphetamine that Harmon manufactured. Slip op. p. 7 n.2. I find the method of measuring the weight of the methamphetamine and the liquid together to be inherently problematic and to require ascertaining the legislative intent behind the manufacturing-of-methamphetamine statute. I conclude that the legislature did not intend for the liquid byproduct of the manufacturing process to be included in the measurement of the weight of methamphetamine involved.

Indiana Code section 35-48-4-1.1 delineates the different classes of felonies based on the weight of the methamphetamine involved, and the dividing line between a Class A and a Class B felony is three grams. The statute states:

- (a) A person who:
 - (1) knowing or intentionally:

⁵ At first blush, there does not appear to be a split in our Court regarding how to measure the methamphetamine involved; both methods are acceptable. But, if the measurement of the methamphetamine involved can include the liquid, then the weight of the drug will always be greater than three grams and the conversion-ratio method will never be used.

(A) manufactures;
(B) finances the manufacture of;
(C) delivers; or
(D) finances the delivery of;
methamphetamine, pure or adulterated; . . . commits dealing in
methamphetamine, a Class B felony, except as provided in subsection (b).

(b) The offense is a Class A felony if:
(1) The amount of the drug involved weights three (3) grams or more; . .

Ind. Code § 35-48-4-1.1. The language of the statute itself provides the best evidence of legislative intent, and we strive to give the words in the statute their plain and ordinary meaning. *Brown v. State*, 912 N.E.2d 881, 894 (Ind. Ct. App. 2009).

Using the word “grams” as the unit of measurement in the statute indicates that it is the solid drug that is intended to be measured, not the liquid that is used to manufacture the drug. As the majority indicates, grams are a unit of mass whereas it is a more common practice to measure liquids in units of volume. Slip op. p. 11 n.3; *see, e.g., Using Metric Units and Symbols*, Northern Michigan University – Computing for Teachers, <http://ellerbruch.nmu.edu/classes/cs255w02/cs255students/MAGNUSO/P9/common.pdf> (last visited June 11, 2012) (“It takes about 29 grams to equal one *dry* ounce [A liter] is basically a *fluid* volume unit as is the smaller metric unit called the milliliter (ml).”) (emphases added).

Also, construing the statute in a way that would include the liquid along with the methamphetamine would defeat the purpose of delineating Class A and Class B felonies at three grams, as it could potentially eviscerate the Class B felony manufacturing-of-methamphetamine charge. If the methamphetamine was found in the middle of the

manufacturing process and the weight of the liquid was included in the total weight of the drug, there would never be an instance where the amount of methamphetamine would be less than three grams. The legislature surely did not mean to create a statute that could never be applicable. Additionally, Class A or Class B felony status would depend on the accident of what stage in the manufacturing process the police found the methamphetamine. This cannot be what was intended.

The statute also includes “pure or adulterated” methamphetamine when measuring the amount of methamphetamine involved in the manufacturing process. Another panel of this Court has found that both the liquid and solid should be considered when determining the weight of the drug being manufactured. *Hundley*, 951 N.E.2d at 581. In *Hundley*, this Court held that when “the intermediate step is so near the end of the manufacturing process that the final product is present in the chemical compound, that substance qualifies as an ‘adulterated drug’ for purposes of our manufacturing statutes.”

Id. I do not agree.

“Adulterate” is defined as “[t]o debase or make impure by adding a foreign or inferior substance.” Black’s Law Dictionary 52 (9th ed. 2009). I do not think this definition is meant to include a drug in the middle of the manufacturing process; it is only meant to refer to a debased final product. So, to add a substance after the manufacturing process is to adulterate a substance, but products used in the manufacturing process do not adulterate the byproduct produced. Accordingly, I do not believe that the legislature intended the liquid ingredients used to manufacture methamphetamine to be included in the calculation of the amount of drugs involved.

A more appropriate method for determining the amount of methamphetamine a person is manufacturing is using a conversion ratio based on the amount of ephedrine or pseudoephedrine that is present. This method uses a scientifically determined formula to calculate how much methamphetamine would be produced based on the amount of ephedrine or pseudoephedrine that is used in manufacturing. Using a conversion ratio allows for a reliable measure of the weight of the drug that will be produced without adding in the additional weight of any precursors that are still present in the manufacturing process when the methamphetamine is discovered.

Other jurisdictions around the country have adopted this method, and expert witnesses are employed to apply the conversion ratio due to its case-by-case variability. *See, e.g., People v. Wilke*, 854 N.E.2d 275, 278 (Ill. App. Ct. 2006) (“an agent for the United States Drug Enforcement Administration . . . would testify to a mathematical formula used for determining how much methamphetamine could be produced with a given amount of precursor pseudoephedrine.”); *Hill v. State*, 161 S.W.3d 771, 777 (Tx. Crim. App. 2005) (“[Agent from Deep East Texas Regional Narcotics Task Force] replied that by using the amounts listed on each package, he calculated a total of 5,760 milligrams of pseudoephedrine. He further testified that such an amount of pseudoephedrine would yield approximately 3.5 grams of methamphetamine after completion of the ‘cooking process.’”); *State v. Camerer*, 29 S.W.3d 422, 424 (Mo. Ct. App. 2000) (“The criminalist explained how pseudoephedrine and anhydrous ammonia are used to manufacture methamphetamine. One gram of pseudoephedrine normally yields one gram of methamphetamine.”). I believe this is the best method to use to

determine yield when the methamphetamine is in the middle of the manufacturing process. The State recognized in its oral argument the existence of the conversion ratio. As an alternative argument, the State contends that from the amount of ephedrine used in the manufacturing of the completed product, the jury could extrapolate as to how much methamphetamine the unfinished manufacturing process would produce. I do not agree with the State.

It is essential that an expert witness be present at trial to testify to the conversion ratio and how it applies in each case. As we indicated in *Halferty*, a conversion ratio between ephedrine/pseudoephedrine to methamphetamine can be used, but it can change “depending on the cooking process, on whether pill binders are stripped from the ephedrine/pseudoephedrine, and on the person who is ‘cooking’ the methamphetamine.” 930 N.E.2d at 1153. With so many ingredients involved in the manufacturing of methamphetamine and so many different factors that can alter how those ingredients affect the yield, determining yield is not a task that should be undertaken by a lay person. When the difference of such a small amount can have such a profound effect on a potential sentence, the trial court needs to be sure that the yield is accurate.⁶

Therefore, while I agree with the majority that there is insufficient evidence to establish that Harmon manufactured at least three grams of methamphetamine, I do not agree with the assumption that my colleagues make about the way in which the yield of methamphetamine can be measured. I would find that only the finished product, pure or

⁶ One exception would be when the amount of the drugs being manufactured is so large as to permit a reasonable inference that the element of weight has been established. *See Halsema v. State*, 823 N.E.2d 668 (Ind. 2005).

adulterated, can be considered when determining the amount of the drug that is being manufactured or that a conversion ratio and an expert witness should be used when the manufacturing process is not complete and the yield is uncertain.