



Director. The burden is on applicant to show that the claim language is complete and that the deductions were made in error. An applicant dissatisfied with the decision of the Director can petition the Commissioner under 37 C.F.R. § 10.2(c).

### Opinion

Pursuant to 37 CFR 10.7(c), Petitioner must particularly point out the errors which the applicant believed occurred in the grading of his or her examination in the request for regrade. The directions also state: "No points will be awarded for incorrect answers or unanswered questions." The burden is upon the Petitioner to show that his chosen answer is the most correct answer.

In his September 20, 1997, Petition to the Commissioner, Petitioner argues that deductions were improperly taken with respect to a number of specific points. These will be addressed in the order set forth in the petition of September 20, 1997.

### **Grading methodology and mootness of Petitioner's argument**

The grading methodology is a complex process, accurately set forth in the Director's decision. Petitioner is asserting that there was a mistake in the regrade, and that he is entitled to 8 additional points. Even if Petitioner were to be given these 8 additional points, however, he still would not achieve a passing score. Petitioner's converted score, after the regrade, is 16. Assuming arguendo that Petitioner is entitled to the additional 8 points, he would be given a converted score of 24, still well short of the 70 points needed to pass the examination.

## **Petitioner's Page 1**

### **Exam Question 1**

#### **MD-2. Compounds "derived" from**

Petitioner chose to address the chemical option of the examination. Errors were assessed for defining the claimed products as "derived from" the structure set forth as Ia. See MD-2. In chemistry, the term "derive" is well established. Webster's New World Dictionary of the American Language 396 (1968) sets forth the definition of "derive". Among the definitions is one specific to chemistry: "in chemistry, to obtain or produce (a compound) from another compound by replacing one element with another." (emphasis in original). Petitioner's claim is to a method of preparing compounds derived from the formula Ia. However, the test required Petitioner to claim a method of preparing compounds such as that described in the formula Ia, not compounds derived from that formula. The common chemistry definition would suggest that the claim set forth by Petitioner was "to obtain or produce (a compound) from another compound [i.e., compound Ia] by replacing one element with another." In contrast, what the answer required was "to obtain or produce ([the] compound) [Ia] from another compound by replacing one element with another." This is entirely different from what Petitioner claims.

#### **S1-3, MD, DIR. "Thioester group"**

Errors were assessed for defining X as an ester or thioester group  $R_1C(=O)S(CH_2)_m$ . Petitioner argues that the specification "reveals that the thioester reactant is properly involved." However, the question requires that the claim "must be directed to preparing only compounds 3, 4, 11, and 13." Thus, according to the problem,  $R_1$  must be  $(CH_2)_mX$  with X

being any of  $\text{OC}(=\text{O})\text{CH}_3$ ;  $\text{OC}(=\text{O})\text{phenyl}$ ;  $\text{C}(=\text{O})\text{C}_2\text{H}_5$ ; or  $\text{OC}(=\text{O})\text{H}_2\text{CH}_2\text{CH}_3$ . None of these four compounds is a thioester. Thus Petitioner did not follow the requirement that the method “must be directed to preparing only compounds 3, 4, 11, and 13.”

**MD-2, S1. W is O only**

Petitioner points out that the disclosure describes a set of chemical reactions that would permit W to be O or S, i.e. oxygen or sulfur. Petitioner asserts that “Under exam circumstances this is no error.” This response is misleading because under any circumstances this is an error. The directions call for preparing only compounds 3, 4, 11, and 13; however, when W is S, there is no possible way of “preparing only compounds 3, 4, 11, and 13” because these compounds do not contain sulfur. An inspection of the reaction set forth at the top of page 6 of the exam shows that when sulfur is one of the reactants, the compounds produced will have sulfur in them.

**MD, V1 “As shown”**

Petitioner states:

Grader conceded that no points were deducted but applicant see (sic) no proof of that. Applicant contends that point (sic) were deducted. This supposed error was marked repeatedly over the entire examination margins. The grader was obsessed with it.

In this case, an inspection of the actual test indicates that although additional errors could have been assessed, they were not. Petitioner has not pointed to any pages or addition errors to support his assertion. He cannot simply say that a mistake was made, he must point out what that mistake actually is. However, evidence that no error was assessed is found in Petitioner’s own request. **MD, V1** means that no error was assessed. If an error had been assessed, the

test notation would have been: MD -2, V1. Contrary to Petitioner's assertion, no error was assessed on this point.

**UL-2. "of thiethylamine or piperidine"**

Petitioner states: "If the instructions are conflicting on a particular point the examinee should be given the benefit of the doubt." However, there is no conflict in the instructions. Petitioner was supposed to "present the broadest claims...which are inclusive of the preferred embodiments." The broadest claims, therefore, include the preferred embodiments and anything else that was not in the prior art and yet is part of the invention. Unfortunately, Petitioner chose to present a claim that included only the preferred embodiments. Thus, Petitioner did not follow the requirement that he draft the broadest possible method that includes the preferred embodiment. His suggestion that his claim was the broadest possible method that includes the preferred embodiment is refuted by the correct answer, which is broader than his claim and contains the preferred embodiment.

**Petitioner's Page 2**

**MD-2. "derived" from**

Petitioner argues that points in question 2 were never added to his score. As explained in the regrade, corrections to grading errors are made to the gross or raw score, then converted. In this case, a correction was in fact made to the raw score, but it had no effect on the converted score.

**UL-2, SI**

Petitioner draws the structure Ia (found in the test question at page 2) on page 3 of his answer book. That structure shows the position of the group called R<sub>5</sub>. Petitioner then states

in the answer book at page 3, fourth line from the bottom of the page: “wherein  $R_3$  represents  $-(CH_2)_m-OH$ ”. Petitioner later defines  $R_3$  as  $(CH_2)_m-O-C(=O)-NHR_1$  or  $(CH_2)_m-O-C(=O)-OR_1$ ”. Such a process of claim drafting leads to confusion. The instructions for claim 2 require the production of only compounds 6, 8, and 9. This would preclude the use of reactants where  $R_3$  is an OH or ester group other than the carbamate.

**UL-2, Solvent “of ethyl acetate or chlorine containing solvent”**

Although ethyl acetate or a chlorine containing solvent are preferred embodiments for the solvent, they are not the only embodiment. Indeed, the very problem states that mixtures of ethyl acetate or a chlorine containing solvent are also preferred embodiments. Such mixtures would not be within Petitioner’s claimed invention. Moreover, the problem says that any organic solvent for the ketomethylester will work: the use of “such as ethyl acetate or a chlorine containing solvent” simply means that these are representative examples. However, when Petitioner drafted a claim that would only cover the use of ethyl acetate or a chlorine containing solvent, he unnecessarily limited the claimed invention. Once again, Petitioner failed to “present the broadest claims . . . which are inclusive of the preferred embodiments,” as instructed.

**MD, V1-2, MD, V1, “as shown”**

Petitioner suggests that the promised 2 points were never added. As discussed above, corrections were made to the raw score which did not have an effect on the converted score.

**MD, V1, “as shown”**

The Regrader indicated on page 5 that no points had originally been deducted from Petitioner’s score and so no points would be added. Petitioner states “Again the points

promised were never added.” No points, however, were ever deducted. If they had been, the grading notation on the exam would have been: MD -2, V1, not the MD, V1 which is clearly marked in the examination booklet. Finally, adding up all of the deductions listed in the margin of the examination book shows that no points were deducted for this mistake.

#### **UL-2. A base “of thiethylamine or piperidine”**

An error was assessed because of an unnecessary limitation. Although thiethylamine or piperidine are specifically mentioned bases, they are not the only bases that can be used. The description of the invention states that the acylation occurs “in the presence of a base, such as thiethylamine or piperidine.” Thus, thiethylamine or piperidine are not the only bases that can be used. However, Petitioner drafted a claim that would only cover the use of thiethylamine or piperidine, unnecessarily limiting the claimed invention. Again, Petitioner failed to present “the broadest claim,” as instructed.

#### **Petitioner’s Page 3**

#### **Exam Question 2**

#### **UL-2. “R5 represents carbamate...”**

In the test, Petitioner drew a structure that did not have the group R5; instead it had a specific structure. Petitioner wrote “wherein R5 represents carbamate-(CH<sub>2</sub>)<sub>m</sub>-OC(=O)NHR1.” Unfortunately, when Petitioner drew a structure with R groups and then stated “wherein R5 is ...” and there is no R5 on the structure, it is very confusing, especially when the Petitioner had already defined R5 in at least two different ways earlier in the claim. See test page 3. Petitioner admits there is redundancy but states that it is harmless in this case. This is not so. The test instructions state that points will be deducted for using language

that is vague or indefinite, or for failing to interrelate or incorrectly interrelating steps and components of the claim. Inserting unnecessary and confusing terms into a claim is not harmless.

**MD-2. “While maintaining”**

Petitioner is again asserting that he was not credited with points on the regrade. As discussed above, a correction was made to the raw score which did not have an effect on the converted score.

**UL-2. “reacting said ... with a chloroformate....”**

Petitioner suggests that this is the same mistake he made earlier and he should not be charged a second time for the mistake. The reaction of the compound of formula (VII) with a chloroformate is an unnecessary step for which no points were previously deducted. The correct product compound is not a carbonate as shown in Petitioner’s answer. In the disclosure statement at page 5, the reaction set forth by Petitioner appears. However, because the instructions direct that the process make only compounds 6, 8, and 9 of the table and exclude compound 12, the recited reaction was an unnecessary limitation.

Again, Petitioner failed to present “the broadest claim”, as instructed.

**Question 3**

**PR-3 “A method of preparing...” and WP-5 (in conjunction with asserted products)**

Errors were assessed against the Petitioner for a claim that had the wrong product. Petitioner asserts his preamble was in conformity with the instructions; however, this is incorrect. The instructions for claim 3 are “starting with a compound of the formula  $R_4-C(=O)-(CH_2)_{m+1}-I$ ” make all compounds of the invention where  $R_5$  is  $(CH_2)_m-S-R_1$  in formulas

Ia through Ih. The preamble sets the stage for the claim. Thus, one would expect a preamble that indicated what was to be made. Petitioner's preamble did not contain a recitation consonant with the instructions. For example, Petitioner's preamble does not describe the making of compound 15 in the table on page 2 of the test, i.e., cyclohexyl. In addition, Petitioner's preamble does not describe making R1s that are substituted phenyls where the substituent is halogen, C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> alkoxy, nitro, amino, hydroxy and trifluoromethyl. Such oversights cannot be ignored and the grader correctly deducted points for the oversight. Likewise, Petitioner's recited product included compound Ia which is the generic formula for all of the compounds, as shown at the first page of the disclosure statement. Thus, the product was not limited as required by the instructions. When this mistake is coupled by an incorrect statement of what R groups are, the products claimed are much different from the instructions, including such things as halogens and nitro groups for the R groups when these were not part of the invention.

**Petitioner's Page 4**

**MD-2, S1, NAB. "R<sub>4</sub> definition includes compounds outside the scope of the invention"**

Petitioner's answer states that "R<sub>4</sub> represents C<sub>3</sub>-C<sub>7</sub> cycloalkyl, substituted C<sub>3</sub>-C<sub>7</sub> cycloalkyl, phenyl, halogen, C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> alkoxy, nitro ..." To a chemist, this implies that R<sub>4</sub> can be a halogen. Unfortunately R<sub>4</sub> cannot be a halogen. Petitioner argues that he simply chose to "omit unnecessary verbiage." Words that define the scope of a claim are not unnecessary verbiage. Petitioner cannot simply leave-off words of a claim. Petitioner continues: "Instead of explaining what was substituted into what the Applicant made the substitution and continued on with the answer." If a claim is not drafted with an explanation,

and the lack of such an explanation changes the scope of the claim, there is a problem. Here, Petitioner has claimed material that should not have been claimed. Moreover, Petitioner freely admits that he “inadvertently omitted C<sub>1</sub>-C<sub>3</sub> alkylthio.” Finally, Petitioner’s answer incorrectly includes hydroxyl for R<sub>4</sub>. These errors support the deduction.

**MD-2, Si, NAB. “R<sub>1</sub> definition includes compounds outside the scope of the invention” and R<sub>1</sub> not shown in formula on page 7 before the R<sub>1</sub> definition”**

Petitioner’s claim states “R<sub>1</sub> represents C<sub>1</sub>-C<sub>5</sub>, alkyl, phenyl, halogen, C<sub>1</sub>-C<sub>3</sub> . . .” To a chemist, this implies that R<sub>1</sub> can be a halogen. However, R<sub>1</sub> cannot be a halogen. Petitioner chose to omit “substituted phenol where the substituent is selected from the group consisting of halogen...” Words that define the scope of a claim are not unnecessary verbiage. Here, Petitioner has claimed material that should not have been claimed. Moreover, petitioner has not claimed any substituted phenols for R<sub>1</sub>. These errors support the deduction.

**WP-5, S1, MD, DIR. “R<sub>5</sub> represents a thioester group”**

Page 9 of Petitioner’s answer claim states “R<sub>5</sub> represents a thioester group -(CH<sub>2</sub>)<sub>m</sub>-S-R<sub>1</sub>.” However, Petitioner’s definition of R<sub>1</sub> is incorrect. It is not possible to correctly define R<sub>5</sub> using an R<sub>1</sub> that is incorrect. In addition, cyclohexyl--present in compound 15 of the table--has been omitted from the description of R<sub>1</sub>. These are errors on Petitioner’s part.

**MD, VI-2. “As shown”**

Petitioner states again that he was not credited with certain points on the regrade. As discussed above, Petitioner’s raw score was corrected but there was no effect on his converted score.

## **Petitioner's Page 5**

### **Gr-1. "In the presence of a base"**

Petitioner states that "in a base" means in the presence of a base; however, as explained by the Regrader, there can be a difference between the two terms. "In the presence of a base" simply requires a small amount of base in the solution that the reactants are being dissolved in. In a base would require solubilizing the reactants in the base. Petitioner has not met his burden of showing that the deductions were made in error.

### **Question 4**

Petitioner argues that points were unfairly taken off for a number of different markings of question 4. The test stated: "Claims 1 to 4 are worth twenty five (25) points each." The test also stated: "Any claim anticipated by the prior art will receive no credit." Petitioner lost the entire 25 points on this question because he wrote a claim that was anticipated by the prior art. A patent claim that is anticipated by the prior art is invalid.

Petitioner provided a formula for claim 4 on page 11 of the answer book. According to the disclosed prior art, substituted thiazoles were known. Using the nomenclature set forth for Petitioner on page 11 of the answer book, those prior art compounds had Z=benzimidazolyl, benzofuranyl, or benzoxazolyl; R<sub>3</sub>=cycloalkyl or phenyl; and R<sub>4</sub>=phenyl, cyclohexyl, or C<sub>1,7</sub> hydroxyalkyl.

In Petitioner's claim 4, Z is defined as including benzimidazolyl, benzofuranyl, or benzoxazolyl. See page 11. R<sub>3</sub> can be phenyl. See pages 11-12, set m=0 and take X=phenyl. R<sub>4</sub> can be phenyl. See page 12. Thus, the claim reads on compounds that are in

the prior art. There has been no error in deducting 25 points from Petitioner's score for question 4.

### **Conclusion**

Petitioner must obtain a score of at least 70 points to pass the afternoon section of the Examination. Petitioner obtained a score of 14 on initial grading and a score of 16 after regrading. Inasmuch as this falls below the required 70 points, Petitioner has not passed the afternoon section of the Examination. Additionally, Petitioner asserts that he is entitled to eight additional points. Assuming arguendo that he is in fact entitled to that number of points, he still would fall far short of the number of points needed to pass the Examination.

### **ORDER**

Upon consideration of the petition to the Commissioner, it is

ORDERED that the petition is denied.

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Date

  
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