

## Product Specification Compliance Worksheet

### **For Question #1 – Please utilize Specification Reference Sheet #1 & Image #1**

1. On Tuesday, October 29, 2019 the gummy worm factory in Winchester, TN received an inbound load of chocolate flavoring, a sample of which is depicted in the image below. Based on the provided specification, review the image compared with the key properties on the spec and determine which is the correct answer below.
- a) The load is outside of specification as it relates to inbound packaging formats.
  - b) The load is outside of the specification limits as it relates to the age of the product versus the inbound shelf life guarantee.
  - c) The load is outside of the specification limits as it relates to flash point.
  - d) Both A and C.
  - e) Both B and C.

### **For Question #2 – Please utilize Specification Reference Sheet #2**

2. Sieves are often used to determine the particle size distribution of a material. Aggregates are defined as the clumps or larger particles that do not pass through the sieve where fines are small particle sizes that do pass through a sieve, smaller than the target size of which you have specified. The below are results of 4 100-gram sample tests for marshmallow bits. The test is performed by pouring the marshmallows through a nested sieve system and measuring what is left on the tray that did not pass through to ensure they are either not sticking into clumps or have too much starch left behind. Given the spec and sieve size table on Specification Reference Table #2, which lot code of material is out of spec as it pertains to both aggregate and fines?

- a.) Lot code: 081419L21

| Tray Label | Amount per tray (grams) |
|------------|-------------------------|
| A          | 0                       |
| B          | 94                      |
| C          | 6                       |

- b.) Lot code: 101219L21

| Tray Label | Amount per tray (grams) |
|------------|-------------------------|
| A          | 5                       |
| B          | 87                      |
| C          | 8                       |

- c.) Lot code: 101419L23

| Tray Label | Amount per tray (grams) |
|------------|-------------------------|
| A          | 2                       |
| B          | 93                      |
| C          | 5                       |

- d.) Lot code: 091819L23

| Tray Label | Amount per tray (grams) |
|------------|-------------------------|
| A          | 3                       |
| B          | 93                      |
| C          | 4                       |

- e.) All in spec

***For Questions #3 & 4 – Use Specification Reference Sheet #3***

3. You are in charge of developing a new flavor of mixed berry marshmallow bites for a kids snack product. This will be produced in a facility that is within your current network and produces other items in your product portfolio. It is your role on the team to screen potential flavors and present an array of options to the marketing team for review.

Based on the attached specification that accompanied your sample, please answer why this particular blueberry flavoring is not an appropriate fit for your product based on the factory criteria.

- a) Your factory location holds a standard relative humidity of 55% based on product stickiness concerns within your portfolio.
  - b) Your factory personnel can ergonomically handle ingredient packaging that is 30 lbs. or less.
  - c) You have no temperature controlled storage for raw ingredients and the facility is in Miami and produces 12 months of the year.
  - d) All of the above (A through C) are reasons why this powder will not work in your facility.
  - e) The product family produced in this facility is Kosher certified.
4. Your marketing team is looking to produce a marshmallow snack for children that is organic, gluten free, kosher and is free from GMOs. Based on review of this particular ingredient from the same specification, would this item fit into the market scenario?
- a. Yes
  - b. No because it is not Gluten Free
  - c. No because it is not Kosher
  - d. No because it contains added sugar
  - e. No because it is not organic.

***For Question #5 – Use the items on the table.***

5. During the 4/23/2019 production run of the Confetti Cake sku at the Duncan Hines facility, the machine operator pulled a sample carton off the production line to perform a quality check against the net contents. You will find the sample in front of you on the table. This particular carton was deemed a defect based on not achieving the appropriate net weight. Based on your assessment, determine the best rationale as to why this carton was a defect.
- a. The operator did not take the tare weight of the packaging into account versus the declared net weight of the sample.
  - b. The pouches were over filled.
  - c. The pouches were under filled.
  - d. A component was missing from the packaging.
  - e. There was an additional component in the package.