FLAVOR SHOT CONTAINER SYSTEM

A system for delivering a liquid dose of food seasoning in one quick motion, including a container with a circular bottom surface, circular walls leading up to a circular top opening, a set of de-stacking lugs on the interior of the bottom surface, a top flat rim, and a lid. The container holds a liquid dose of food seasoning sealed in with the lid, and the container is wrapped in a packaging sleeve indicating the type of liquid flavoring in the container.
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CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Application No. 61/800,630, filed on Mar. 15, 2013, the entire content of which is incorporated in the present document by reference.

BACKGROUND

[0002] The description herein relates to a liquid seasoning container. Seasoning may refer to any combination of spices and herbs or sauces providing flavor, either liquid or solid, to be used as seasoning for food. Using seasoning is a requirement to flavor most dishes, but successfully mixing seasonings and flavors can be difficult for the inexperienced cook. Additionally, even experimental cooks may wish to try new seasonings. While relatively large containers may be commercially available for sauce mixes, hesitant consumers are unlikely to buy new flavoring ingredients in large amounts. Flavor variety is important to customers, and there is a need for a way by which cooks can easily try a new flavor combination without having to buy too large of a container of an unfamiliar ingredient.

[0003] As such, there is a need for a one-time use liquid seasoning container, to be used by inexperienced cooks or people lacking time to experiment and flavor a meal with a shot of liquid seasoning. A shot may typically refer to a small quantity of a strong substance, such as espresso or alcohol, typically served in small cups for coffee, or small ‘shot’ glasses for alcohol. In the context of this application, the shot is a pre-measured liquid dose of food seasoning for flavoring a meal, in a small shot glass shaped container. A pre-measured blend may be one dose of liquid oil and seasoning for a balanced and reliable flavor experience, which takes the guesswork out of cooking.

[0004] Some small disposable shot glass shaped containers exist on the market, some of which are made of polyethylene, with non-alcoholic contents, targeting yogurts or mini-desserts. Companies such as Gu®, or Marks & Spencer use and sell these types of containers, with an outer packaging to seal the product. Several suppliers manufacture these containers, such as for example Europlastique. For instance, Europlastique manufactures an 85 ml container. This type of container is presented as well suited for French ‘ verrines’, which are petits and hors d’oeuvres served in a shot-like glass in restaurants or for entertaining, containing a few bites generally eaten with the help of a utensil, such as a fork or spoon.

[0005] The Europlastique model consists of a circular base, smaller than its circular opening. The opening has no lip or protruding rim, since it is used for drinking or scooping. Such a container is intended to be filled and its contents eaten within a short amount of time, such that means for long term storing and preserving of the contents without refrigeration is not incorporated in the design. The bottom of the glass may be flat or convex outward to adjust the desired volume. A flat bottom makes scooping out contents difficult.

[0006] One common inconvenience with shot glass shaped containers is that suction is created between two or more containers in a stacked configuration. For each pair of stacked containers, a cavity is created between the inside of a bottom container and the outside of a top container. When stacking occurs, air is pushed out, leaving the cavity with a low-pressure, and creating suction which leads to the top shot glass shaped container adhering to the bottom shot glass shaped container. The presence of suction makes de-stacking inconvenient and unproductive.

[0007] Typically de-nesting features of a cup style package are placed on the outside of the cup using rings under a flange or along the outer cup wall, or by a full ring around the base.

[0008] The present invention aims to solve at least one of the aforementioned problems associated with shot glass shaped containers, and provide a container well suited for storing and dispensing a shot of liquid seasoning.

SUMMARY

[0009] A system for delivering a liquid dose of food seasoning in one quick motion, comprising a container with a circular bottom surface, circular walls leading up to a circular top opening, a set of de-stacking lugs on the interior of the bottom surface, a top flat rim, and a lid. The container holds a liquid dose of food seasoning sealed in with the lid, and the container is wrapped in a packaging sleeve indicating the type of liquid flavoring in the container.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] A more complete appreciation of the depicted embodiments and many of the attendant advantages thereof will be readily obtained as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings, wherein:

[0011] FIG. 1 depicts a cross-sectional view of a first embodiment;

[0012] FIG. 2 depicts a top view of a first embodiment;

[0013] FIG. 3 depicts a cross-sectional view of a second embodiment;

[0014] FIG. 4 depicts a top view of a second embodiment;

[0015] FIG. 5 depicts a cross-sectional view of a stack for a second embodiment;

[0016] FIG. 6 depicts a view of a first embodiment of a packaging sleeve;

[0017] FIG. 7 depicts a view of a second embodiment of a packaging sleeve;

[0018] FIG. 8 depicts a view of a second embodiment in a packaging sleeve;

[0019] FIG. 9 depicts a view of lugs in a first embodiment; and

[0020] FIG. 10 depicts a view of lugs in a second embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0021] A frustum is the part of a solid intersected between two usually parallel planes, and a circular frustum is a frustum with a circular cross-section.

[0022] In an exemplary embodiment of the present invention, a shot glass shaped container has a circular frustum shape, which delivers a small dose of food seasoning, preferably in one quick motion. Contents of the container are intended to flavor and inspire, for example, a one pan meal large enough for several people, such as two, four or eight people. The shot glass shaped container contents may comprise blended herbs and spice, combined with liquid components such as oils, broths, vinegar or stocks to create new flavor blends. In an exemplary embodiment, flavor blends such as lemongrass and ginger based on Thai cuisine, cinn
mon and garlic inspired by Moroccan cuisine, or garlic and Italian herbs for a Tuscan flavor may be stored in the shot glass shaped container. One benefit of an exemplary embodiment may be the ability to easily pour out a thick seasoning mixture out of the shot glass shaped component, whereas a thick season seasoning mixture would be difficult to extract from a differently shaped container. In an exemplary embodiment, the seasoning blend present in the shot glass shaped container may be homogeneous, or non-homogeneous. In an exemplary embodiment, the seasoning blend present in the shot glass shaped container may be visibly non-homogeneous. In an exemplary embodiment, the seasoning blend is intended to be cooked. In an exemplary embodiment, the seasoning blend is a liquid recipe mix to be applied to a target food. In an exemplary embodiment the seasoning blend may not comprise an acidic component such as vinegar or lemon juice. In an exemplary embodiment the seasoning blend may comprise an acidic component such as vinegar or lemon juice.

[0023] Depending on the seasoning blend, the liquid-solid ratio between liquids such as oils, and solids such as spices and herbs may vary. In an exemplary embodiment of the present invention, the liquid seasoning to solid spices and herbs ratio of the cup contents in volume may vary between 20/80 to 80/20. In a preferred embodiment of the present invention, the liquid seasoning to solid spices and herbs ratio of the cup contents in volume may vary between 20/80 to 50/50, and more preferably between 35/65 to 45/55. In another preferred embodiment of the present invention, the liquid seasoning to solid spices and herbs ratio of the cup contents in volume may be about 40/60. In an another preferred embodiment of the present invention, the liquid seasoning to solid spices and herbs ratio of the cup contents in volume may be about 52/48.

[0024] In a first exemplary embodiment shown in FIG. 1, the circular frustum shaped container has a height (1), rim (2), with rim outer diameter (3), rim inner diameter (4), tapered walls (5) with wall thickness (6), and a bottom circular flange (7). As shown in FIG. 2, the rim (2) has a rim thickness (8), and the bottom (9) has legs (10) and a base diameter (11).

[0025] In an exemplary embodiment, the container takes the general shape of a shot glass shaped container. In an exemplary embodiment, the container may have constant taper side walls (5). In another exemplary embodiment, the container may have curvilinear walls. The container may be made out of a lightweight and shatter proof material, such as polypropylene, which is easy to use for molding. In a second exemplary embodiment, using a clear material such as PET allows consumers to easily identify the contents and the associated flavor combination. The weight of the empty container may range from 8 to 14 grams, and may be proportionally increased or decreased for a larger or smaller sized container. In a first embodiment the container material may be polypropylene. In an exemplary embodiment, the polypropylene used may have a clear white shade resulting from the use of an EVOH blend which provides a strong oxygen barrier. Polypropylene is notably convenient to mold and provides a barrier to moisture. In a second embodiment the container material may be a thin wall polyester (PET), which is clear. Polyester provides a stronger oxygen barrier than polypropylene, and permits a long shelf life for some product types.

[0026] In an exemplary embodiment, the container may be further characterized by thin walls, with wall thickness (6), and a thin and flat circular rim (2) extending outwards from the walls at the container’s top. This flat rim allows a sealing lid (12) to be positioned over the container top. In an exemplary embodiment, the lid (12) can be made of foil or a laminate film, sealed to the rim (2), and can be easily peeled off to pour the shot glass shaped container’s contents into a pan. In an exemplary embodiment the lid, which may be a laminate film or other laminate structure, may be heat sealed onto the cup rim, and may be covered with a coating on its underside, designed to withstand oil seepage. The seal of the lid may withstand leakage yet be easy for a customer to peel off.

[0027] The bottom (9) of the container is not flat, but instead has a convex shape facing out from the bottom of the container. A portion of the wall surface may extend below the bottom surface and forms a circular flange (7) allowing the container to be stable on a flat surface.

[0028] In an exemplary embodiment, a round shape of the container bottom may improve the ease with which a customer may scoop out any remaining ingredients with a spoon. Similarly to the container’s tapered walls, the bottom of the container is rigid and smooth, fixed in its unique convex facing out position. Around the periphery of the container’s bottom, small rounded lugs (10) may be positioned at regular intervals within the container to separate the container walls in order to prevent suction and allow the shot glass shaped containers to be un-stacked. The shape of the lugs is such that a spoon may not catch on the lugs, and contents of the cup may not get stuck around the lugs when emptying the cup. In an exemplary embodiment, the de-stacking lugs’ small size and rounded shape allow a spoon to be wiped across the container to empty remaining ingredients. Nesting of containers (i.e. stacking containers within one another) is useful for shipping and storing the containers in large quantities, for instance at a production facility, or food processing plant. The lugs further allow for adequate nesting of containers, such that de-nesting is simple. As shown in FIG. 3, the lugs may introduce space between two cups in a stacked configuration. In an exemplary embodiment of the present invention, a number of lugs may be any number sufficient to maintain a desired spacing between two cups, such as three, four, six or eight lugs.

[0029] Shot glasses used for alcohol consumption may be categorized by volume as small, single or double. Depending on the country, small shot glass volume may be as low as 20 mL, and double shot glass volume may be at most 100 mL. In an exemplary embodiment of the present invention, the shape and volume of the container may be similar to that of a shot glass used for alcohol consumption. Accordingly, in an exemplary embodiment of the present invention the volume of the container is at least 20 mL, and at most 100 mL. In an exemplary embodiment of the present invention, the volume of the container may be between 50 mL and 90 mL. In an exemplary embodiment of the present invention, the volume of the container may be between 60 mL and 80 mL. In another exemplary embodiment of the present invention, the volume of the container may be nominally 70 mL. In yet another exemplary embodiment of the present invention, the volume of the container may be nominally 90 mL.

[0030] In an exemplary embodiment of the present invention, the height (1) of the container may be between 40 and 80 mm, the container outer rim nominal diameter may be between 40 mm and 60 mm, the container inner rim nominal diameter may be between 45 mm and 50 mm, the base diameter may be nominally between 30 mm and 40 mm, wall thickness may be between 0.5 mm and 1.2 mm, and the taper
may be between a 5 and 10 degree angle, and the container may be filled with 72 mL of contents. In an exemplary embodiment of the present invention, in a stacked configuration, the top shot glass shaped container rim may be located at a distance of 11 mm above the rim of the bottom shot glass shaped container.

[0031] Referring to FIG. 1 and FIG. 2, in a first embodiment, the nominal height (1) of the container may be 75 mm, the container outer rim nominal diameter (3) may be 55 mm, the container inner rim nominal diameter (4) may be 48 mm, the base diameter (11) may be nominally 33 mm, wall thickness may be between 0.8 mm and 1 mm, and the taper may be at a nominal 6.5 degree angle from the axis of rotation of the shot glass shaped container, with a total nominal volume for the container of about 90 mL, which may be filled with 72 mL of contents. Referring to FIG. 2, in this first embodiment, six de-nesting lugs may be used, equally spaced around the periphery of the bottom surface. In this first embodiment, the nesting lugs may be in the shape of triangular prism shown in FIG. 9, which may have nominal width of 0.64 mm. In a first embodiment, the clearance between the tapered walls of two stacked cups, as set by the lugs, may vary between 0.25 mm when the wall thickness is 1 mm, and 0.45 mm when the wall thickness is 1 mm.

[0032] Referring to FIG. 3 and FIG. 4, in a second embodiment, the height (1) of the container may be between 40 and 80 mm, the container outer rim nominal diameter (3) may be between 40 mm and 60 mm, the container inner rim nominal diameter (4) may be between 45 mm and 50 mm, the base diameter (11) may be nominally between 30 mm and 40 mm, and wall thickness may be between 0.5 mm and 1.2 mm. In an exemplary embodiment, the taper angle may be between 5 and 10 degrees from the axis of rotation of the glass shaped container. In a preferred embodiment, the taper angle may be between 6 and 8 degrees from the axis of rotation of the shot glass shaped container.

[0033] In a second embodiment, the height (1) of the container may be 75 mm, the container outer rim nominal diameter (3) may be 55 mm, the container inner rim nominal diameter (4) may be nominally 48 mm with a nominal lip width of 3 mm, the nominal base diameter (11) may be 33 mm, wall thickness may be 0.8 mm thick to 1 mm thick, and the taper may be at a 6.5 degree angle from from the axis of rotation of the shot glass shaped container, with a total volume for the container of about 90 mL, expected to be filled with 72 mL of contents.

[0034] Referring to FIG. 4, in the second embodiment, four de-nesting lugs may be used, equally spaced around the periphery. In this second embodiment, the lugs may be rounded as shown in FIG. 10. As shown in FIG. 10, a radial width of the lugs a may be nominally 1.1 mm with a lug radius b of nominally 0.51 mm while a tangential width c of the lugs may be nominally 1.93 mm, the straight sides of the lug encompassing a sector between 40 and 80 degrees. In an exemplary embodiment, the straight sides of the lug may encompass a sector of about 60 degrees as shown by angle γ in FIG. 10. In an exemplary embodiment, the top surface of the lug TS i.e., the surface which will support the bottom of a stacked cup, may preferably be flat as shown in FIGS. 9 and 10.

[0035] In the first embodiment, the spacing (13) between the outer bottom surface and the surface the cup may rest on may be nominally 2.3 mm. In the first embodiment, the curvature of the bottom surface may be based on a circle with a nominally 22 mm radius.

[0036] In the second embodiment, the side wall thickness may taper from 0.035" at the top to 0.040" at the bottom. The radius of curvature of the bottom surface may be about 32 mm. The annular flange may have feet with a height of 4.45 mm and width of 0.76 mm. The total height from the bottom of the annular flange to the top of a lug may be 11 mm. In an exemplary embodiment, lugs may provide a clearance between the tapered walls of two stacked cups which may vary between 0.008" and 0.017" along the container taper. In a preferred embodiment the clearance between the tapered walls of two stacked cups may vary between 0.010" when the wall thickness is 0.040" towards the bottom of the container, and 0.017" when the wall thickness is 0.035" towards the top of the container.

[0037] In the second embodiment, spacing (13) between the outer bottom surface and the surface the cup may rest on may be nominally 1.5 mm. In the second embodiment, the curvature of the bottom surface may be based on a circle with a nominally 32 mm radius. The geometry of the second embodiment’s bottom surface may simplify the molding process.

[0038] In the second embodiment, a fill line may be indicated 11 mm below the top of the container, and two ribs for molding may be present below the top lip, spaced at 2.54 mm from each other.

[0039] Referring to FIG. 6 and FIG. 7, in an exemplary embodiment, packaging may comprise a sleeve, to be folded around the container, and displaying information with regard to the flavor blend. In another embodiment, the packaging may comprise a sleeve with a corner cut-out to allow customers to view the cup in its packaging. In an exemplary embodiment, the sleeve may be made of cardboard.

[0040] Further, in another exemplary embodiment, the container has a volume between 50 mL and 90 mL. In another exemplary embodiment, the container has a volume between 60 mL and 80 mL.

[0041] In another exemplary embodiment, the container has a nominal volume of 90 mL. Further, in another exemplary embodiment, the container has a nominal height of 75 mm.

[0042] In yet another exemplary embodiment, the flat rim of the container has an outer diameter between 40 and 60 mm. In another exemplary embodiment, the flat rim has an outer diameter of 55 mm. In another exemplary embodiment, the flat rim has an inner diameter between 45 and 50 mm. In another exemplary embodiment, the flat rim has an inner diameter of 48 mm.

[0043] In yet another exemplary embodiment, walls of the circular frustum container have a constant taper of 6.5 degrees.

[0044] In yet another exemplary embodiment, the bottom circular flange of the container has a diameter of 33 mm.

[0045] In another exemplary embodiment, the set of de-stacking lugs comprises six lugs evenly distributed around a periphery of the bottom surface. In another exemplary embodiment, the set of de-stacking lugs comprises four lugs evenly distributed around a periphery of the bottom surface.

[0046] In yet another exemplary embodiment, a wall surface thickness of the container is substantially equal to 0.8 mm.

[0047] In yet another exemplary embodiment, the container is made out of polypropylene. In another exemplary embodiment, the container is made out of polypropylene and an EVOH blend with oxygen barrier properties.
In another exemplary embodiment, the lid of the container is made out of a thin wall polyester. In yet another exemplary embodiment, the contents of the container comprise liquids and solids with a liquid to solid ratio of the contents in volume between 35/65 and 45/55. In another exemplary embodiment, the contents of the container comprise liquids and solids with a liquid to solid ratio of the contents in volume of 40/60. In another exemplary embodiment, the contents of the container comprise liquids and solids with a liquid to solid ratio of the contents in volume of 52/48. In another exemplary embodiment, the contents of the container comprise liquids and solids with a liquid to solid ratio of the contents in volume of 40/60. In another exemplary embodiment, the contents of the container comprise liquids and solids with a liquid to solid ratio of the contents in volume of 52/48.

Further, it should be appreciated that the present disclosure is not limited to the exemplary embodiments shown and described above. Instead, various alternatives, modifications, variations and/or improvements, whether known or that are, or may be, presently unforeseen, may become apparent. Accordingly, the exemplary embodiments, as set forth above are intended to be illustrative, not limiting. The various changes may be made without departing from the spirit and scope of the disclosure. Therefore, the apparatuses according to the exemplary embodiments are intended to embrace all now known or later-developed alternatives, modifications, variations and/or improvements.

1. A shot-glass sized container in the shape of a circular frustum for delivering a liquid dose of food seasoning, comprising:
   - a fixed bottom surface with an interior and exterior;
   - a set of de-stacking lugs on the interior of the bottom surface;
   - a smooth wall surface with a top;
   - a flat rim around the top of the wall surface; and
   - a lid;
   wherein the bottom surface is convex facing out and a portion of the wall surface below the bottom surface forms a circular flange, wherein an inside diameter of the flat rim is at least as large as an inside diameter of the bottom surface, and wherein a volume of the shot-glass sized container is at most 100 mL.

2. A shot-glass sized container as in claim 1, further comprising a packaging sleeve.

3. A method for delivering a liquid dose of food seasoning comprising:
   - creating a food seasoning, comprising a plurality of cooking ingredients;
   - storing the dose of food seasoning in a shot-glass sized circular frustum shaped container;
   - sealing the container with a peelable lid, wherein a volume of the shot-glass sized container is at most 100 mL.

4. A method as in claim 3, further comprising the step of packaging the container with a sleeve.

5. A method as in claim 3, wherein the liquid dose of food seasoning is used to flavor a meal in one quick motion.

6. A system for delivering a liquid dose of food seasoning in one quick motion, comprising:
   - a shot-glass sized circular frustum shaped container with a fixed bottom surface with an interior and exterior, a set of de-stacking lugs on the interior of the bottom surface, a smooth wall surface with a top, a flat rim around the top of the wall surface, a peelable lid; and
   - a liquid dose of food seasoning;
   wherein the bottom surface is convex facing out with a portion of the wall surface below the bottom surface which forms a circular flange, wherein an inner diameter of the flat rim is at least as large as an inner diameter of the bottom surface, and wherein a volume of the shot-glass sized container is at most 100 mL.

7. A system as in claim 6, wherein the system further comprises a packaging sleeve.

8. A system as in claim 6, wherein the container has a volume between 20 mL and 100 mL.

9. A system as in claim 6, wherein the container has a nominal height between 40 and 80 mm.

10. A system as in claim 6, wherein walls of the circular frustum have a constant taper angle.

11. A system as in claim 10, wherein walls of the circular frustum have a constant taper angle, such that the angle is between 5 and 10 degrees.

12. A system as in claim 6, wherein the bottom circular flange has a diameter between 30 and 40 mm.

13. A system as in claim 6, wherein a thickness of the circular walls is between 0.5 and 1.2 mm.

14. A system as in claim 7, wherein the packaging sleeve is a single piece.

15. A system as in claim 6, wherein the dose of food seasoning comprises at least one solid and at least one liquid.

16. A system as in claim 15, wherein the dose of food seasoning comprises liquids and solids with a liquid to solid ratio of the contents in volume between 20/80 and 80/20.

17. A system as in claim 16, wherein the dose of food seasoning comprises liquids and solids with a liquid to solid ratio of the contents in volume between 20/80 and 80/20.

18. A system as in claim 17, wherein the dose of food seasoning comprises liquids and solids with a liquid to solid ratio of the contents in volume between 35/65 and 45/55.

19. A system as in claim 6, wherein lugs provide a clearance between walls of two stacked containers such that the clearance is between 0.26 mm and 0.35 mm.

20. A system as in claim 6, such that a distance between the bottom surface and a surface the container rests on is between 1 and 3 mm.