Manufacturing methods of healthy and edible cups- An integrative review

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Abstract. A teacup is for drinking tea. It is also larger than coffee cups. Morning tea cups are typically bigger than afternoon tea cups. Several studies suggest that customer perception of beverages and purchase preferences were heavily associated with form and colour of a vessel. Since previous studies centered on wine, bubble beverages, juice, chocolate, etc., there has been barely any study on the required drinking tea vessels. In this review, tea experts and designers were approached to gather data for their perspectives. This study revealed that a tea-drinking vessel’s architecture and manufacture could affect the tea’s taste and scent perception. Cups used for hot drinks like tea and coffee are constructed of materials like steel, glass, acrylic, and stainless steel, plastic and also wood cups. These findings explain a cup of biscuits concept and production processes.

1. Introduction
Teacups were first produced by China’s East India Trading Company during the UK’s George IV. Porcelain and clay cups began manufacturing in both Indian and China. In 1750, a man called Robert Adams encouraged cup attaching handles. He was fascinated by this new form, since traditional forms were always quite uncomfortable. Materials used to make these tea sets have vastly changed with time. There are china make, glass, acrylic, and stainless steel, plastic and also wood cups. Teacups are so common in every country and whoever loves picking them or just drinking a beautiful cup. It’s all unique and as fragile as a pretty tea cup. Many cup types were used by many countries, including ancient Japanese cups, Chinese cups, and English bone cups.
For several reasons, vintage teacups are the most popular collectibles. Their clever inventions and affordable prices render them future-oriented. Ancient Japanese tables are impressive illustrations of Asian craftsmanship. The term can mean teacups produced in Japan until around 1952, but anything produced after 1910 is always called vintage. Today, carnival glass products are common among ancient collections due to their various colors, shapes, and sizes. Different forms of teacup materials such as acrylic, paper, ceramic, bone, etc are most widely used.
Plastic: Tea connoisseurs do not really suggest plastic cups including stones and clay cups. All plastics are not chemically inert and can leach radioactive elements at high heat exposure. Tea connoisseurs do not really recommend disposable cups including stones and clay cups. Using it, however remember that not all plastics are chemically inert and can leach radioactive elements at high heat exposure.

Paper: The paper cup is a UN papered cup frequently lined or coated with plastic or wax to prevent leakage. It can be made of recycled paper and used worldwide. Many paper cups are produced for one use, and disposed of. Recycled paper is used to make paper cups due to waste issues and regulations. Because most cups of paper are covered in plastic (polyethylene), it is uncommon to reuse and recycle paper cups, mainly because polyethylene may not be separated throughout the disposal process.

Wood: Wooden teacups are traditional Japanese tea that infuses the loving hand of Mother Nature. Wood cups are typically constructed of sturdy wood with natural lacquer or other non-porous surface therapy.

Ceramic: It is used mainly in tea ware manufacturing. Ceramics involve stoneware, porcelain and terracotta, baking pottery produced in ovens. Aesthetics and usage are popular choices. Ceramic holds heat for longer owing to its porosity, and its high-temperature.

Porcelain and Bone China: Bone china and porcelain cups have been used as tea for decades and are the perfect alternative to consuming tea (often clubbed under ceramics). And treated correctly, porcelain is highly fragile, but not hazardous leading to vitrified glaze. Porcelain bone is like bone ash mixed with clay, needing bone ash. The smooth style of bone china and porcelain tables prevent the tea tannins from sticking to the side and hence maintaining the tea body is the product of most British tea ware and the British scientist claims.

Glass: Glass cups follow all the above tea specifications. Vitrified glass interacts with tea, but may quickly lose heat depending on its thickness. Borosilicate glass is a good alternative, nearly as great as porcelain. Double-walled glass cups are influenced by the temperature-retaining internal wall, whilst the outside wall facilitates preservation.

Stainless Steel: Stainless steel cups are the strongest in the batch, but they often necessarily measure their reputation. Sweetening stainless steel cooking appliances was a late issue, as damaged stainless steel utensils might leak iron and nickel in food. It was so many to drink on stainless steel cups in a limited period. Because of its inherent heat actions, the metal transfers heat to the lip much more quickly than a porcelain cup.

Nowadays, an edible cup recognized amongst us, i.e. Biscuit cup consisting of a biscuit. Tea lovers would be more probable. After tea, the biscuit may be served in this cup. It’s like two single-consumption tastes. This study would address the manufacturing methods of these types of cups.

2. Materials used for consumption of hot drinks

2.1 Paper cups

This study combines two parallel life-cycle assessment (LCA) studies with the overarching objective of educating facility managers on long-term sustainable usage of disposable or reusable cups. Study 1 compares three discarded cups of polystyrene (PS), bio-based and compost-based plastic (polylactic acid; PLA) and PLA-lined print (bio-paper). Study 2 compares the disposable PS cup with reusable cups or dishwasher [45]. Methods Due to differences in data and computational methods utilized, existing LCA tests show inconsistent and sometimes opposing results. Comparison of plastic cups, Study 1, using various commodity data sets for unique life-cycle processes and different recycling requirements. Study 1’s waste management options were incineration, recycling, composting, and anaerobic digestion. Next, the PS cup is identical to reusable hand-washed and dishwasher cups (Study 2). LCAs use single data sets for reusable cups and analyze a rising increase of reusable cups. Cup LCA outcomes were only assessed within and not through affect divisions. All facts related to hot coffee vending machines used in Dutch office environments.

The Used Disposal Paper Cups (EDPCs), which have ignited the issue in recent years, has become a major focus in waste management in solids to develop the process. On that basis, this study explores the isolation of novel bio-eco-based (CNCs) from UDPCs by citric acid hydrolysis. Acid
concentration shows the impact on CNC microstructure and concentrations. The optimized yield (55 wt. percent) occurs as a rod-like shape with a 13.7 to 0.6 nm diameter, resulting in 76 wt. percent hydrolyzed CNCs. Finally, thermo-gravimetric study tested CNC thermal stability (76 wt. percent).

Sensory approval assessment was used to evaluate if the black philter coffee serving temperature affected the substance’s hedonic sensory quality in a smear utilizing the native assessor (n=25). In addition, a comprehensive sensory examination is used to determine the qualities of a coffee smell, color, and aftertaste. A thermal camera was used for exothermic spectral analysis and a cup of coffee before intake to guarantee that the correct drinking temperature was reported until the assessors had consumed it. ANOVA Software (APLSR) analyses collected experimental results. In this study, coffee temperature affects several sensory characteristics. Coffee was unfavorable at 31.0 °C according to hedonic qualities (P<0.05). In comparison, coffees were positively correlated with hedonic effects at high temperatures at 70.8 °C and 74.4 °C.

Incredible production is waste paper cups. The energy derived from the waste of known quantity and structure is then examined. The kinetic waste parameter is one of the key characteristics that define the energy from waste to become an energy unit. TGA was often used to thermal degrade cellulosic materials kinetic study. In this research, thermo gravimetric analysis for paper cup waste was measured at 25 °C / min, 30 °C / min in the air and 30 °C in the nitrogen atmosphere, and thermo gravimetric curves were used to measure the activation energy.

United Kingdom is expected to use 2, 5–10 billion disposable coffee cups per year. Many of these cups end with waste or reject, since most poly-coated paper cups are not recyclable or recycled. Here, we focus on an on-the-ground trial at 12 colleges and company locations to see how reusable cups can be encouraged by readily implementable acts. The research found that both sustainability initiatives and alternative vendors boosted the usage of reusable cups. Although disposable cup prices increased their use, a discount on reusable cups was not increased. The effects of specific treatments were minimal but combined, which indicated a combination of measures created the greater change in behavior. No policies negatively impacted net sales of hot drinks. Following the project, one university agreed to offer more plastic cups to its students for free. Reusable cups in three cafes increased to 33.7%. This indicates that a load paired with alternatives will significantly improve the long-term use of reusable cups.

A paper cup with an essential handle called as disclosed. A paper cup sidewall end has an expanded section. For heat fuses, one end of a paper cup overlaps the other end. An end further from the middle of the extended section is heat-fused to the sidewall, heat-fused to hold the remaining portion of the extended section disconnected, not heat-fused to the sidewall. The cut lines on the expanded portion form the structure of the pair of handlepieces.

This technological innovation containers, in specific paper cups intended to serve hot or cold drinks or edibles. This is meant for producing a paper cup that can be manufactured at a low cost, is well designed for carrying in the hand, is supplied with a convenient means to thermally separate the contents of the cup from handling it. It also makes the cup elegant stiffness and mechanical strength and enables drinking from the cup with liquids in it. It’s even treated in a known waterproof manner.

Insulated Paper Cup is made of inner and outer shells. Inner and outer shells have a frusto-conical form. The interior is more tapered than the exterior. Both the inner and outer shells have upper rims, which are bent outwardly. The inner shell’s bottom resides in the shell’s sealed bottom. The inner shell is coated in rubber, like polyethylene.

It’s like a folded paper cup consisting of a cylindrical frame, a zigzag shape with an open top and a closed bottom. To mitigate the energy flow between hot and cold beverages in the cup and the user’s side, paper card stock is regularly folded to establish parallel folds. It also helps the consumer to hold the cup long without discomfort or frustration. Details of trademarks, patent proposals and records can be included, at the applicant’s discretion, to be used in the allegations during litigation as further limitations on the grounds of patentability of any revised grounds under any prior art pursued.

The overview intends to allow the Patent and Trademark Office and the general public to quickly decide the type and substance of the professional disclosure from a cursory inspection. The straw insertable paper cup lid is mounted above the paper cup. The top plate section has a slit straw insert. This slit lets the consumer insert a straw to consume anything like tea, coffee, soft drink, etc. The remainder is composed of plastic. A protruding outer ring is created in the top section.
around the opening. By removing the lids as garbage after usage, the lids decompose easily. This prevents leaked lids from creating environmental harm. And as the straw is passed into the opening, the protruding ring avoids expanding the opening.

It is a paper cup with a double wall frame with air space between walls. This double-walled paper cup helps to keep the beverages warm or cool for some time [62]. The spiral paper strip is applied to the inner walls of the ideal design. This offers structural rigidity and develops air pockets between walls. The cup may be constructed with a reasonably narrow diameter with a limited air gap between internal and external walls.

This development includes a new, enhanced paper cup with a self-made stirring spoon [59]. To stir, use heated coffee cups with cream or sugar spoons. Therefore, having a stirring spoon as part of a paper cup is the key aim of this innovation. The value of this is shaping a stirring spoon “tear-off” as part of a paper cup handle. Another and more significant purpose of this development is the creation of a stirrer as a lateral extension of a paper cup’s overlapping portions and an simple means of separation in the shape of a perforated sheet. The purpose of this design is to provide an adjacent perforated sheet of paper with a single spoon attached to the outside of the cup.

This design of cups and particularly cups made of paper with plated side walls filled with waterproofing material. The aim of this is to provide a class cup with a substantial framework, a friendly appearance, and a clean and comfortable fit [13]. This cup comprises a combination of a sheet of parchment, a layer of waterproofing material, and the bottom of waterproofing material. And the cup has sidewalls of vertical sections, alternately one layer and several parchment thicknesses.

This cup making machine innovation comprises of blanks of suitable materials. Every cup is made of a single piece of material folded on a cross-line, overlapping and sealing the wall pieces together. This consists of supporting a shelf or stack of blanks to create cups of the appropriate shapes [39]. It also consists of a substantially wedge-shaped arm, adapted to accommodate for a cup with an usually open mouth section and a strongly tapered circular body terminating in a wedge-shaped collar. The blank is placed over the participant.

The device comprises a frame placed on a vertical shaft and a revolving turret on the shaft [23]. In an equally distributed configuration, different workstations are mounted on the frame surrounding the turret. A collection of tapered mandrels mounted on the turret in line with each of the workstations. The turret is rotated intermittently to match the mandrels sequentially with each workstation. For axial movement, a tubular assembly is inserted in each mandrel to initially loosen the mandrel cup.

This discovery involves a single wrap paper cup making the system, and deals more precisely with the computer making flat bottom cups [14]. In previous cup machines of the sort utilising two turrets, the indexing of the turrets was usually achieved by using a different indexing device for each turret or a single indexing device with two output shafts attached to each of the turrets. During the dwelling times, this form of configuration found it impossible to achieve and retain a specific spatial relationship between the two turrets and the other system components.

A paper cup machine with a blank sidewall and a blank bottom wall in each cup, a framework with a frame and a vertical shaft installed on the frame with a revolving tower mounted on the shaft, a number of workstations mounted on the frame in an equally distributed configuration around the tower with a number of tapered mandrels mounted on the tower in line with each pole [26].

This paper cup serves both hot and cold drinks [21]. It is built to manufacture cost-effectively to thermally separate the contents of the cup from the hand carrying it. The cup forms a circular cross-section, made of waxed parchment, tapering downward. This cup is built to help the user feel more relaxed keeping the cup in hand when carrying hot beverages, cold drinks or edibles. The outer body is provided with an outwardly rolling circumferential bead at its peak and at its lower end with an inward and upward switch. The upper end has an outwardly rolled and outwardly extended circumferential pin.

In this research, an integral handle paper cup is disclosed. At least a distal end of the extended section is heat-fused to the sidewall while a residual part of the extended section is used as a separate segment not heat-fused to the sidewall. For the principle of contours of a pair of handle bits, cut lines are formed on the extended section’s detached portion [25]. Folding lines are created on each Segment handle, generating flaps by folding the segment handle along the folding lines. A reinforcing
strip is attached to a connecting portion between the parts of the handle pair. There is now a zigzag-shaped, pressed cylindrical enclosure, open top and bottom paper cup [38]. The cup is a Stock Paper Card that is uniformly divided in order to build parallel plates that further mitigate the flow of energy between the hot or cold drinks in the cup and the customer’s side that maintain the drink cooler without any discomfort or discomfort. This cup has water, tea, juices and other beverages. There are also issues such as making a flat folded cup opening into a flat lower cup, which is the simple opening of the cup. So the material of the cup pours out. Another difficulty is the tendency to leakage in making flat plied cups reversible to a flat foundation. Each of these cups is the third difficulty of not providing a self-sustaining basis. The purpose of this paper cup is to solve these problems. The challenge of waste disposable paper cups (WDPCs) has been a significant issue for scientists in recent years. In addition to this, industrial businesses have become involved in designing strategies to address the problem [63]. This analysis discusses the underlying challenges and social hurdles to WDPC recycling. It also explains the commercial usage of WDPCs. The final section of this work includes some recommendations for recycling WDPCs properly.

2.1.1. Summary.

In this research area, the authors commented on methods to prepare a paper cup. Most authors mentioned the disposable cup and produced a cup rendered of fossil-based polystyrene (PS), bio-based and compost-based plastic (polylactic acid; PLA) and PLA-lined paper (paper) with several different materials. LCAs use single data sets for reusable cups and analyse the impact of a increasing number of reusable cups. Cup LCA results were only assessed within and not through affect divisions. It is used to distribute hot beverages. An end further from the middle of the extended section is heat-fused to the sidewall, heat-fused such that the remaining portion of the extended section stays separated, not heat-fused to the sidewall. This is intended for the supply of a paper cup that can be manufactured at low expense, is well adapted for carrying in the side, and is equipped with an effective means to thermally separate the cup contents from the hand holding it. To mitigate the energy flow between hot and cold beverages in the cup and the user’s side, paper card stock is regularly folded to establish parallel folds. Another and more significant purpose of this development is the creation of a stirrer as a lateral extension of a paper cup’s overlapping portions and an simple means of separation in the shape of a perforated line. The purpose of this design is to provide an adjacent perforated sheet of paper with a single spoon attached to the outside of the cup. The aim of this is to provide a class cup with a substantial framework, a friendly appearance and a clean and comfortable fit. A collection of tapered mandrels mounted on the turret in line with each of the workstations. For axial movement, a tubular assembly is inserted in each mandrel to initially loosen the mandrel cup. It is built to manufacture cost-effectively to thermally separate the contents of the cup from the hand carrying it. Several materials and methodology have to be made for manufacturing of paper cups.

2.2. Plastic cups

This analysis adopted a substance like a double-piece nestable cup-like container with a recessed wall open top of the continuous sidewall [22]. A small, double-ended layer of heat-shrinkable thermoplastic material forms the jar sidewall. The sheet ends are connected to a liquid-tight line. From this stage, opening the mouth of the upper end of a container was inferred that the sidewall stretches down to the point near the rim. And then folded inward at the bottom to create a double wall segment and a radially extended upward to the annular section below that divides the bottom section sealed to the radially extended portion at the bottom of the sidewall. The sleeve created from the sheet by linking the ends is heat-shrunken on the mandrel, and the free edge at the bottom portion of the sidewall is created to shrink within. Opposed moulding components turn to each other while the sheet is at an optimal shrinking and forming temperature to define the sheet’s doubled edge and heat the bottom portion towards the radially inward and expanding part.

In this study, a thermally insulated double-walled disposable plastic jar experiment requires a bottle body with an insulating difference within the cup and outside the cup. The double-layer, heat-insulated plastic bottle is open on top and sealed on the bottle bottom [64]. It includes gas for
insulating thermal field. Air is consoling oxygen. The preferred methods of making an individual single-wall plastic jar include spinning, plastic injection moulding, or injecting an inner cup and outer cup and then repairing the inner cup with the outer cup, creating a gap between them. This innovation contains a double-wall thermally sealed plastic container made of polymeric materials used to store hot or cold goods and fluids. Recyclability, increased dimensional integrity, and increased insulation of thermal-insulated double-walled plastic containers are provided. In addition, the concept will translucent a jar. Traditional approaches may be used to produce heat-isolated double-walled disposable.

In this research, a detailed view of a biologically degradable cup involves a safely obtained foam cup and paper cup [11]. The cup holds a biodegradable film inside. By cutting the board into a paper cup, the paper cup is formed. The foam cup is composed of filler. The foam board is broken into parts and each component is rendered into a foam-bond rendered of bio-degradable plastics treated with super-critical carbon-dioxide extrusion. A heating solution adds the foam cup to firmly connect the paper cup to a moist inner wall. A lip outlines the very surface of the foam cup. For the main object of this innovation, a cup ideal for collecting food and biodegrading may be provided. Innovation must also offer a way to create a biodegradable cup.

Designers tested production of easily formed, cheap, and light plastic cups in this research. Molding is a way to create a plastic object [19]. Because a model was produced for a component, it was also noticed that the product performance generated by injection was poor or defective. Naturally, this problem could affect the business because it would require high development costs and time. Some aspects of mould design are important, such as product shape, cavity, operating system, gate system, mould release system, and heat exchange system. That’s why, once mould is produced, the above stuff must be based on the mould design specification. However, most of the fitting is quite difficult to obtain in the decision for the kind and circumstance above. For, if gate position is unreasonable, the product production cannot be optimal. Simulation before producing the mould is required to solve this issue, improving the consistency of the result after injection depends on the template that will be produced, because if the mould was created, a successful product might result. By utilising this programme, certain factors surrounding the injection process could be forecast and the product quality that occurred in the injection process could be enhanced. To minimise this problem, simulation is necessary before the mould is made, so that after injection the outcome is better according to the prototype to be produced, such that if the mould is manufactured it will outcome in a good product. Moldflow is the software. When utilising this process, something could be predicted regarding the injection process and increased product quality that contributed to the injection procedure.

A thermally insulated cup is made of a single-walled or plastic inner cup and an insulating external coating is considered for the study. The outer covering is isolating and consisting of a sheet of paper or blank outer sidewall, written instead on one side of the frame. The insert is identical in style, but smaller in scale. The insert is attempted to adhere to the sidewall blank’s unprinted side in a balanced location to build a two-layer isolation wrapper. Bonding the base layer to less than 20% of insert section [48]. The area next to the insert’s cut side edges is not bonded to, because these edges are not attached to the basic sheet. This covering is then wrapped with one rim in the inner cup. Wrapper baseboard sides overlap and are enclosed tightly to create a side seam. The side seam adhesively suits the sidewall of the inner cup. The side edges of the insert are not between lateral base sheet seal and inner cup. Wrapping may also be applied on the inner cup with one or more cold glue beads (paste adhesive) or a thin film of polyethylene (or equivalent heat sealing substance) on the inner corner of the base layer. This is then heat-activated shortly before wrapping the wrapper around the internal cup and pushing the overlapping side seam into the inside sidewall to tie the side seam simultaneously to keep the sealed wrapper to the sidewall of the cup.

In this experiment, a filtration keeper in a coffee maker provides a collector cup adapted for hot water and hot body sections. A horizontal drain creates a cup top. Infused with warm water, the substance becomes coffee. There’s a threaded sidewall. Currently on cup below and adjacent to filter [16]. Typically, a dispenser on the cup under the filter has an outlet perpendicular to the sidewall to spray the coffee considerably perpendicular to the cord. As is well established, there is a filters device-holding cup in which the filter system is mounted. Normally, the filter device cup has a flat surface and a multitude of tiny pores that cause liquid coffee to flow through but maintain the
coffee grounds. In addition, in certain cases, the filter cup carries a dispenser that sprays the coffee against the cup base to produce minimum froth. This article evaluates a heat-insulating paper cup enhanced seal. A body member with an internal and external surface and an upper and lower surface may be included in this cup. The body part is coated on its outer surface with foamed low-density polyethylene and its inner surface with non-foamed enhanced low-density polyethylene. On the upper rim, the lower panels are coated with a foamed or anti-shaven low density polyethylene, framed or unframed. The body part and bottom panel member are coupled and connected to create a heat bond at the interface between a portion of unframed modified low-density polyethylene coated within the body member and a portion of unframed low-density polyethylene or unframed modified Low-density polyethylene coated on the bottom panel’s upper surface [9].

Many cups comprise of high-quality cellulose fibre in paper plastic with thin internal polyethylene laminate (PPL). PPLs have little recycling options, allowing cups a high degree of tissue pollution. In this work, discarded cups were split into PPL pellets used to shape modern plastic paper composites (PPCs) by reforming polypropylene [40]. At low temperatures, PPL and polypropylene flakes were mixed, dried, pelletized and shaped to prevent cellulose fibre degradation. To improve device adhesion, the PPL flake connection degree and usage of a melted polyolefine connective agent were explored. Tensile, DMA, and thermogravimetric analysis is used to identify materials. Using a binding agent helps increase PP’s tensile strength by 50% to 30 MPa for 40 wt composites. Each PPL flakes. The young module also rises by 1 to 2.5 GPa and fracture by 5. The analysis shows that PPL cups may be reused benefiting existing polypropylene composites.

Ocean plastic is a modern aquatic target. However, they suggest that big issues, including climate change and over fishing, must be resolved. The media and the public sector is partly focused on plastic by simple changes in the way we operate, such as preserving water bottles, and partly on the belief that technological solutions to plastic pollution, like large-scale marine clean-up campaigns and current biodegradable substitutes, could be ‘quick set’ [54]. As such, ocean plastics can deliver a simplistic fact that distracts us from the need for more radical changes to our societal, political, and economic systems that will actually address major marine environmental issues as well as the cause of plastic pollution, i.e. over-consumption.

This is a heat insulated cup consisting of a single-walled paper or plastic inner cup and an insulating outer wrapper [28]. The exterior insulating wrapper comprising of a blank paper base sheet or exterior sidewall and a corrugated paper or foamed plastic insulating cover. Isolating insert very similar in shape to the blank outer sidewall but relatively smaller in scale. The insert is connected to the sidewall blank in a central location to create a two-layered insulating shield. Less than 20% of insert area is attached to baseboard. No adhesive is applied to the region adjacent to the insert’s cut side sides, because these sides are not attached to the baseboard. This is then heat enabled immediately before placing the wrapper around the inner cup and pushing the separating side seam to the inner cup sidewall to bind the side seam together simultaneously and apply the insulating wrapper to the cup sidewall.

It was a container for refrigerated dough or other expandable products, and it’s a condiment cup for icing, and the like includes the following house. The jar has an elongated cylindrical form with a set diameter inner wall and tip [4]. The condiment cup is constructed of flexible plastic, generally cup-shaped, with a normally cylindrical side wall closed by a convex edge at one edge and extended at the other end. The cylindrical side wall has an outer diameter only slightly smaller than the
The container’s inner wall to provide loose friction while the condiment cup is within the container’s cylindrical body portion. The condiment cup is loaded with condiment and placed into the container at one end of the cylindrical frame, with the cup’s open end meeting the cup’s side at one hand. The jar is filled with refrigerated dough or other expandable material so that, as the fluid expands inside the glass, the liquid pushes against the convex dome-shaped lip of the condiment cup and pull the lip of the cup inwards, causing the side wall of the cup and spread outwards to provide tighter friction with the inner container wall to separate the condiments from the interior of the cup. It is a cup-shaped baked pastry with a smooth feel, strong thickness and simple to detach from die [49]. The cup-shaped baked confectionary can be made by installing a dough of a cup shaped baked confectionary having the desired form of a contour on top of a three dimensional metal baking die and having the desired shape of an outer peripheral surface, in a state stretching horizontally by bringing outer periphery of it outside the three dimensional baking die and heating the dough for a while.

2.2.1. Summary.
In this field, so many methods have been implemented to make various plastic cups. Use of plastic cups must be avoided due to its side effects. Hot beverages cannot be served using paper cups. So an alternate source for plastic cups has to be identified.

2.3 Biscuit cups
It is a reconstituted Crisp and Crunchy biscuit made of pieces of baked biscuits, agglomerated inside a binder consisting of at least one carbohydrate and fat, the biscuit has the characteristic feature of maintaining its crunchiness and softness at negative temperature during storage [24]. In comparison, blended frozen confectioneries that contain a biscuit and a frozen confectionery in conjunction with a biscuit and frozen confectionery. The resulting Frozen confectionery profits from the texture difference between frozen confectionery mass creaminess and biscuit crunchiness, often after long storage at freezing temperature.

This is an edible bread cup and shows an instrument and method to create Edible bread cups. The moulding and baking machinery Dough has a top and bottom moulding surface. The bottom moulding sheet has several Cup-shaped female moulds to integrate several identically moulded male moulds into the top moulding sheet Dough is flattened into patties and poured in female moulds and then the male moulds are lowered into female moulds shaping the moulds’ Dough to the Cup form [7]. Guiding rods on the top sheet slip into guide tubes on the bottom sheet to fit the sheets before the moulds come into touch after the sheets are put together and clamps are fastened around the sides of the sheet to hold the sheets together. The dough is baked between papers, causing the dough to grow and fill the Cup shaped gap between moulds. Air is pressed Out of this vacuum, and then into pinholes or channel grooves developed into the top and bottom sheets. After baking, clamps are stripped and sheets separated after which the finished bread cups can be extracted for packaging.

This is the development of the double-walled cup comprising of both an inner and an outer wall, as well as a cup opening on its upper and lower end portion [15]. The exterior wall is composed of parchment, carton, or an equal. The invention’s purpose is to improve the said double walled cup in such a way that it can be produced and constructed more efficiently and simply while maintaining its associated thermal insulating properties, reducing the dual- walled cup’s structural rigidity. The inner cup providing the inner wall is inserted into the outer cup providing the outer wall for this purpose, and particularly secured therein or thereto. The inner cup is constructed of an air-dense plastic substance. These are the Anzac biscuits of culinary range.

Anzacs, as they named them, rendered the ingredients essential for the kitchen, particularly in a kitchen in five-kilogram calico bags packed with flour [57]. Authors created Anzacs because of Scottish heritage, because they were simple to produce. We hope it’s all three mixed. This report focuses on Anzac biscuits combining rolled oats, sugar, desiccated coconut, butter, flour, bicarbonate soda, boiling water, and golden syrup and how these biscuits are directly linked to Australian cultural heritage and commemoration.

An edible cup consisting of twice-baked pastry with an impermeable coating of sugar, water, starch, and gum, with no hot and cold beverages. It lacks inherent toughness without liquid leakage. Furthermore, because such cups are solely edible, it can possibly be concluded that their regular use
in a catering business can protect customers from transmitting infectious diseases orally [43]. In the other hand, compared to paper cups, the edible cups in question are preferable in that they do not generate solid waste. Besides these physical, wellbeing and economic factors, it must be remembered that the cup in question is more prized and appreciated by the customer who has experienced the drink it contains. Cup itself, tasted delicious wafer.

This is a reconstituted, extricable biscuit at negative temperature, composed of hard or soft- baked biscuit parts frozen by the forehand, and a dispersion binder for the aforementioned biscuit parts in the form of an overrun meringue composed of an overrun protein selected from milk and carbohydrate egg white and egg white alternatives, frozen at about -5 ° C[17]. Composite ice-cream item composed of an extracted biscuit structure and a mass of frozen confectionery in combination with this biscuit. So this is a biscuit like cooking process.

The purpose of this study was to test low density lipo protein cholesterol, which decreased the efficacy of biscuits containing 2 g of plant stanols, leading to 3.4 g of plant stanol esters [27]. The biscuit is a modern form of food that can be snacked. In a double blind , placebo controlled, parallel design study, slightly to severely hypercholesterolemia volunteers were randomised to plant stanol or controls. Age, race, lipid profile, and body mass index were comparable. They consumed a control biscuit once a day for two weeks, accompanied by a four-week intervention period of either plant ester biscuit or placebo. During the normal diet, at every point the participants preferred a biscuit a day. Serum lipid profiles were calculated on the first day of run-in, baseline, and end of analysis. Compared to the control, total cholesterols and LDL-to-high-density lipo protein ratio had serum decreases of 4.9%, 6.1%, and 4.3% respectively, and were found with additional plant stanols after 4 weeks of cooking. In those eating a plant stanol biscuit with a meal, a marginally higher reduction in the LDL and LDL / HDL ratio was measured relative to those eating a plant stanol biscuit without any other food. For optimum usefulness, biscuits can be consumed as part of a healthy diet.

This study aimed to investigate whether experts and inexperienced consumers alike would affect attributes of taste and fruitiness in specialty coffee cups with various surface textures [10]. In one of three experiments, 231 participants were observed. Experimental testing at a specialty coffee event in Russia showed that aftertaste and body consistency were recorded while consuming a sandpaper swatch. Participants in the two main trials analysed a range of specialty coffee served in a smooth or rough ceramic cup. The Q graders scored the coffee significantly more acidic when tested from the rough cup relative to the smooth, although the amateurs measured the coffee to be marginally sweeter when drank from the smooth cup rather than the rough cup. When tested from the rough rather than the smooth cup, Q graders and amateurs assessed the aftertaste as considerably dryer. Body orientation wasn’t significantly affected in both experiments. These results indicate that haptic feedback influences both professionals and inexperienced consumers determining particular preferences as well as mouth feel characteristics in specialty coffee. Industry should recognise these results when designing innovative coatings for coffee cups. However, besides imagination, it is important to produce cups that convey any practical and/or perceptual meaning to coffee drinking experience.

The edible cup should be made of carbohydrates and covered with edible wax to fit a sacramental liquid comprising wine, beer or clean water [2]. The communion wafer is sliced and eaten using the solvent to meet sacramental requirements. The cup will also reduce pollution. It is a method of providing individually baked products consisting of the steps of providing an uncooked dough sheet or block with separable portions of the predefined type, removing one or more portions from the sheet or block and then baking the portions to produce individually baked products [8]. Part outlines are described by grooves, score lines, or variations, and sections are then removed from the sheet by breaking grooves or score lines. Grooves or score lines can be intersectional or non-intersectional, either generally straight to represent polygonal-shaped parts, or at least partially consistent to define a non linear entity.

This is a food crop development facility, a food product produced in it, and a food processing facility. The food commodity may have historically truncated cone form causing the plant to be founded [5]. The baking mixture is poured into a tray’s mould cavities, and in the first tray before frying, a second tray is filled with male formers corresponding to mould cavities. As part of a filling station factory, trays pass via the oven on an infinite conveyor to fill the baked product with sweet or
savoury fillings and freezing station. The food component is baked high in liquid to create a thin, strong, impermeable surface layer of gelatinized starch skin.

2.3.1. Summary.
The edible cup should be made of carbohydrates and sealed with an edible wax to hold a sacramental liquid that maybe wine, beer, or purified water. In usage, the wafer of communion is withdrawn and swallowed with the liquid to meet the sacramental requirements. This is a method for the manufacture of a food commodity, a food product produced thereby and a food product processing facility.

2.4. Metal cups
AA7075 is used in the automobile and aerospace industries for large drawability. This research [61] established the value of three major parameters of the deep drawing process, namely blank temperature, arc radius and bounce velocity, on 7075 sheet aluminium deep drawing characteristics. It has been observed that greater formability can be gained if the cup is drawn profoundly by utilizing the maximum die arc and lesser formability as the die profile radius decreases. Temperature, width punching, width from arc, length of strike, strike height, mechanical properties, thickness of sheet metal and section nature. In formability of aluminium content throughout all process parameters, blank temperature, arc radius and punch speed play an significant role.

Blank temperature, arc radius and punching speed play an important role in the formability of aluminium materials. Replace CG metals for a cylindrical cup for UFG metals. Normally the cup edge is rigid and must be machined in manufacturing applications [46]. However, UFG aluminium can have a smaller dimension of these components in view of the surface discontinuities (cracks). The distribution of hardness in UFG cups is more standardised, with an average of 10 points above CG cups. Mould power Etter. Micro forming appears to be a feasible alternative. UFG metals result in a more consistent structure, better type representation and enhanced micro part properties since the UFG method resulted in a more standardised material flow and suggested better performance. Micro forming appears to be a feasible alternative.

The first aluminium products contained tea kettles and utensils. Storage of food can also increase the use of aluminium in cooking utensils. Powds and foils of aluminium may dissolve close to salty, acidic or alkaline food [30]. Coffee aluminium material, normally a little acidic drink distilled in aluminium percolators and generally drunk by those persons who may raise or decrease aluminium in coffee.

The Stainless Steel cup thermal handle contains a stainless steel cup body, a cap and plastic cover. The cup body has a double-layer Stainless Steel cup [29] heat insulated base. The body portion under the jacket is painted and the upper surface is not painted to prevent lip contact when drinking. The cover is designed to protect the cup body’s open surface and prevent the liquid from escaping within the cup body, losing heat outside the cup body, and dust from entering the cup body. Table1. shows consolidated findings for tea or coffee cups processing methods.

### Table 1. Consolidated findings for the nature of materials and methods used for making cups

| Sl.No | Nature of Materials          | Methods used                 | Reference               |
|-------|------------------------------|------------------------------|-------------------------|
| 1     | Paper cups                   | Hand washed or dish washed   | Potting J et al.,2015   |
| 2     | Disposable paper cups        | Thermo-gravimetric research  | Nagarajan KJ et al.,2020|
| 3     | Paper cups                   | ANOVA APP                    | Stokes CN et al.,2016   |
| 4     | Waste paper cups             | TGA method                   | Singh RK et al.,2012    |
| 5     | Disposable coffee cups       | Recycling                    | Poortinga W et al.,2018 |
| 6     | Paper cups                   | Heat fused method            | Amberg WE et al.,1943   |
| 7     | Paper cups                   | Thermal insulation           | Sykes WS et al.,1941    |
| 8     | Paper cups                   | Heating process              | Silver VK et al.,1992   |
| 9     | Paper cups                   | Thermal insulation           | Hed AZ et al.,2005      |
| 10    | Paper cups                   | Heating process              | Sawatani T et al.,1990  |
| Number | Description                                      | Method/Process                               | Authors                  |
|--------|-------------------------------------------------|----------------------------------------------|--------------------------|
| 11     | Paper cups                                      | Thermal insulation                           | Wolff SK et al., 1994    |
| 12     | Paper cups                                      | Thermal insulation                           | Thoma EL et al., 1956    |
| 13     | Paper cups                                      | Waterproofing method                         | Claussen EE et al., 1911 |
| 14     | Paper cups                                      | Hand made                                    | Mehta S et al., 2008     |
| 15     | Paper cups                                      | Rotating thermal insulation                  | Hsieh A et al., 2012     |
| 16     | Paper cups                                      | Hand made                                    | Corazzo PJ et al., 1966  |
| 17     | Paper cups                                      | Heating process                              | Konzal DR et al., 1998   |
| 18     | Paper cups                                      | Heating process                              | Herman C et al., 1938    |
| 19     | Paper cups                                      | Thermal insulation                           | Kim YL et al., 2003      |
| 20     | Paper cups                                      | Heating process                              | Martin C et al., 2005    |
| 21     | Paper cups                                      | Heat shrinkable, liquid tight seam           | Yuhi M et al., 2018      |
| 22     | Two piece nestable cup like container           | Blow moulding and thermoforming              | Hill et al., 1991        |
| 23     | Double-walled disposable plastic                | Extrusion                                    | Chang et al., 2009       |
| 24     | Foam cup and a paper cup                        | Moldflow                                     | Gunawan et al., 2006     |
| 25     | Thermoplastic material                          | Screw thread method                          | De'Lonchki et al., 2006  |
| 26     | Single insulated plastic cup                    | Thermal insulation                           | Breining MA et al., 2004 |
| 27     | Plastic material                                | Thermodgravimetric analysis                  | Mitchell J et al., 2014  |
| 28     | Polyethylene cups                               | Modern biodegradable replacements            | Stafford R et al., 2019  |
| 29     | Thermally insulated cups                        | Thermally insulating, heating process        | Lecat AM et al., 2010     |
| 30     | Thermally insulated cups                        | Crushing and heating                         | Sadlier CE et al., 2015  |
| 31     | Plastic cups                                    | Moulding                                     | Antal Sr K et al., 2000  |
| 32     | Plastic cups                                    | Moulding                                     | Sasaki K et al., 2003    |
| 33     | Crisp and Crunchy biscuit cups                  | Baking process                               | Justi H et al., 2004     |
| 34     | Edible cups                                     | Moulding & heating process                   | Beloff AL et al., 2012   |
| 35     | Biscuit cups                                    | Crushing and heating                         | D'amato G et al., 2011   |
| 36     | Anzac biscuit cups                              | Hand made                                    | Supski S et al., 2006    |
| 37     | Biscuit cups                                    | Crushing and heating                         | Petriini F et al., 2000  |
| 38     | Biscuit cups                                    | Hard or soft baked crushing                  | Dufort C et al., 2009    |
| 39     | Biscuit cups                                    | Crushing and heating                         | Kriengsinyos W et al., 2015 |
| 40     | Biscuit cups                                    | Hand made                                    | Carvalho FM et al., 2020 |
| 41     | Biscuit cups                                    | Hand made                                    | Amato J et al., 2004     |
| 42     | Biscuit cups                                    | Hand made                                    | Blaschke D et al., 2004  |
| 43     | Biscuit cups                                    | Hand made                                    | Aslanis RS et al., 2006  |
| 44     | Aluminium cups                                  | Cup drawing                                  | Venkateswarlu et al., 2010 |
| 45     | Aluminium cups                                  | Micro extrusion                              | Rosochowski et al., 2007 |
| 46     | Aluminium cups                                  | Cooking utensils                             | Lione et al., 1984       |
| 47     | Stainless steel cups                            | Cooking utensils                             | Lin., 2017               |
2.4.1. Summary

The aluminium content of coffee, a slightly acidic beverage that is typically brewed and processed in aluminium percolators and is generally drunk by those persons who can raise or decrease the amount of aluminium in coffee. The cup body has a tightly enclosed and heat insulated wall with a double-layer Stainless Steel cup. The portion of the cup body under the jacket is painted and the upper surface is not painted to prevent contact with the lips when drinking the drinks.

3. Ingredients used in biscuits

Biscuit is a common food product, where the main ingredients are wheat flour, sugar and fat [31]. The primary product used in the production of biscuits is wheat flour, and the second portion is flour starch. This research discussed characteristics of starch properties such as collation properties, gelatinization properties, crystallinity. Starch is the key structural element of many foods, fat or sugar both plays essential roles. Sugar provides taste, colour gives quality and the appearance of a biscuit. Besides that, it affects the processes of starch gelatinization. Fat plays a crucial role in producing biscuits, and the form of fat used determines the quality of the end-product. This article also explored the functional properties of main biscuit ingredients, concentrating on wheat flour, sugar and fat.

In this examination, a mixture of two to nine of the following ingredients comprises of nineteen dough systems: starch, water, fats (coconut and/or palm oils), sugars (saccharose, invert) and chemical leavenings (ammonium bicarbonate, sodium bicarbonate, citric acid, and sodium pyrophosphate) [12]. It observed thermal activity over a large temperature scale (20°C to 160°C). Baking thermal analysis at the same heating rate (3°C / min) using three separate methods (DSC, DMTA, and TGA) produced details on phase change, length, and dough mass change during heating. Temperature thresholds were set to which all ingredients reacted. Fat transformations between 10°C and 50°C melted. Sugars improve starch transition temperatures. Chemical waste restricts temperature changes, while fats and sugars slow their operation. The texture of biscuits is the result of ingredient interactions; thus, complete dough cannot be presented as a single inclusion of all ingredients.

The primary ingredient in almost all biscuits is wheat flour. The characteristics of the biscuit, therefore, depend on the form of wheat used, the difference in the same wheat variety from season to season, and the settings of the wheat mill [37]. Medium, gluten-free wheat flour is widely used for cooking. This segment discusses maize, frying, wheat flour and its components and deals with some of the main factors in the milling and biscuit making process.

In certain biscuits, sugars and syrups are the main and essential ingredients. Structural and tasteful, they alter and improve sweetness of substances. Detailed specifications are defined for crystalline and even glucose syrup formulations [36]. In this analysis the function of fats and oils in the production of cookies is studied taking account of the qualitative, compositional, production and test specifications of various types of fats used for the production of dough fats, filling or cream fats, chocolate and laminate fats, release agents and spray oils[6]. An detailed description of the chemical and physical characteristics of fats and oils and a review of the different phases of the oil process, including how the physical properties of the oils are modified in accordance with the product requirements, are also given.

In this study, biscuits are made in place of dehulled pigeon pea (Cajanus cajan L) flour (PPDF) [60]. Recovery of edible cotyledon content from PPBF obtained by-products of milling. The protein content of PPBF is higher (29.42g/100 g) than PPDF (24.67g/100 g). Composite mixtures are prepared at a rate of 95:5, 90:10, 85:15, 80:20 and 75:25 by replacing PPDF or PPBF wheat meal (WF). Biscuits were tested for shape, physical and sensory parameters. The protein value of PPDF and PPBF changed 1.3 and 1.4 times respectively, along with improvements in the comparable fibre material. Results showed that good quality biscuits with improved levels of protein and fibre may be produced without drastically affecting the sensory performance of the biscuits by replacing the wheat flour with PPDF 85:15 or PPDF 90:10. This research demonstrates the efficacy of by-products of pigeon pea in biscuit manufacturing.

In this analysis, food technologists would reassure the public that most of the additives are health neutral and that essential manufacturing aids that have healthier and more attractive, affordable and better items are used safely [32]. A food additive can be identified as a functional chemical added to food in regulated quantities, facilitating manufacturing, prolonging shelf lives, providing
microbiological stability, improving nutrition. Colored Acids, gelling agents, acidity regulators, emulsifiers, glazed agents, anti-caking agents, Emulgating salts, leavening agents, anti-smoking agents, flavouring preservatives, antioxidants, taste stabilisers, chemical starch sweeteners, improves strength.

The results of wheat protein concentrate and sodium caseinate (NaCas) on a short formulation of dough biscuits were evaluated in relation to dough properties and quality of the final product [18]. Dairy powders were applied at 5 %, 10% and weight of the flour at 15%. The usage of 5 % and 10% protein powders decreased the durability of the dough. The spring and cohesion values for Doughts composed of 10-15% of NaCas were considerably higher compared with control values (p < 0.05). The surface brownness of both protein powders was improved, as seen by an improvement in L * colour. Bakery concentrate of whey protein decreased the volume of biscuit, whereas NaCas powdered biscuits were significantly greater than control (p<0.05). Overall, protein powder biscuits got difficult to eat when protein powder grew. Con focal laser microscopy shows that NaCas doughs have broad networks of proteins and that NaCas tends to connect with flour proteins.

The capacity of flour mixtures of wheat and plantain (stops 1 and 3) was evaluated in this research [42]. Composite meal is made with wheat (white) and plantain meal from 90/101, 80/201, 50/501, 100/0, 90/103, 80/203 and 50/503 in grades 1, and 3. The mechanical properties, the shape, the mineral content and the sensory characteristics of biscuits have been investigated. The density of loose meats (LBD) was between 0.46-0.53 g/mL, while the density of boxed bulk (PBD) was between 0.64-0.76 g/mL. The possible water absorption (WAC) ranged from 1.19-2.02 g of water per g of flour and 0.50-1.00 g of oil/g of food. The LBD and PBD composite mixtures were higher than the control values (100% of white flour-sample D wheat). The above differences ranged from 11% -9.96% for moisture, 1.21 percent -1.27% for ash, 2.98% -4.30% for fat, 11.82% -12.64% for protein, 0.97% -1.52% for fuel, and 69.56% - 71.21% for carbohydrates. The protein and carbohydrate content derived from composite meal of study F 80/203 was considerably lower than that of other biscuits. The overall protein value of composite flour 50/503 (12.64 percent). The mineral content differed between samples. The concentration ranged between 5.89 and 6.14, 0.48 and 0.78, and 21.97–23.46 mg/100 g. The quantity of calcium and iron in meal biscuits F was slightly higher than other biscuits, while the volume of phosphorus in hybrid flour biscuits 90/101 (sample C) surpassed the average of other biscuits.

The fat content of the recipe decreased from 20 percent (control) to 10 percent, 8 percent and 6 percent respectively to create low-calorie soft-dough biscuits [56]. Figure 1 shows the effect of GMS, SSI and GG on hardness of biscuit dough and on biscuit breaking. The RWAM Test Water Absorption Meter, Brabender Farinograph and Texture Analyzer were used to check improvements in dough’s rheological properties. As the fat volume declined, the hardness of the dough increased and the extruder dough length, as measured in RWAM, increased from 43s (20%) to 167s (6%) and the strength of the biscuit dough increased from 180 to 540 units (BU). The texture analyzer registered an improvement in dough stiffness of 20.78 N to 44.08 N. In certain instances, incorporating a fat equivalent to maltodextrin and polydextrose improves the power and consistency of the dough. The presence of gycerol monostearate and guar gum has a beneficial influence on the intensity and consistency of dough. The fat decline impacts the quality of biscuits. Biscuit production increased considerably as fat extracted by maltodextrin. A further improvement in the texture of cookies was observed when gycerol or guar gum monostearate mixed with maltodextrin is used.

In these experiments, the Lucknow Regional Food Research Production Center used sweet potato flour to make biscuits [53]. Lucknow’s nearby store delivered sweet potato tubers. Carefully arranged, washed, clipped, sliced, bleached, sprayed, fermented, dried and processed into flour. Sweet potato flour contains less calcium, but is rich in dietary fibre and fibre, allowing a strong mix of wheat flour for biscuit production nutritionally advantageous. In this experiment, 10% Sweet potato flour was combined with wheat flour, 20%, 30%, 40%, and 50% respectively. These samples were then submitted to practical properties analysis. The next composition of various flour mixtures used to bake cookies was determined using standard procedures. Physico chemical examination & sensory test was undertaken to determine the acceptability of SPF biscuits. These were checked for sensory examination, including overall colour, flavour, taste, and acceptability. Analytical and chemical examination of SPF biscuits involved moisture content, diet, fat and complete ash.
Figure 1: Effect of glycerol mono stearate (GMS), sodium steroyl lactylate (SSL) and guar gum (GG) on hardness of biscuit dough and on biscuit breaking strength. [56]

Flavor is a major consideration in chocolate in this testing, whether plain, milk, or synthetic coating. The production of chocolate is well managed to maintain chocolate’s essence [33]. Chocolate and cocoa are widely used to produce cookies for flavour and colour. It’s a costly part, but buying and handling is crucial.

Dry fruits, particularly currants and raisins, are commonly used and contribute significantly to the flavours and texture of biscuits. Nuts are often used rather than their content in their ‘good’ image. However, certain nut-related health issues must be discussed [34]. People with allergies can respond if they even ingest nut substance traces so that manufacturers can better mark and track nut handling very closely.

The food flavour is a mixture of fragrance, scent and sound in this report. To be eaten every day by a huge number of people, the food should be gentle, delicate. The main group of aromas generated from plants [35]. Their unpredictable behaviour often contributes to the lack of tastes in baking. If traditional salt and sugar is weak, the flavour is greatly improved and the pH is right for fruit flavours.

In this inquiry, defatted sesame flour has been supplemented with 30, 40, and 50% millet flour and used to make biscuits. By removing sesame seed flour, the protein content of the biscuits was raised slightly. Cookies in millet are thicker than mixtures [1]. Biscuit diameters and weights have reduced, thickness and spread variables have risen, and the degree of substitution with sesame has strengthened. Sensory research findings have shown that cookies have been well valued for their taste and crispness but are perceived as colourless.

The above Figure 2 indicates the ingredients needed to produce delicious biscuits. These ingredients are also used to render delicious, nutritious biscuits. And this is readily available in very economical market. Various tiny ingredients may be included for leavening, seasoning and texture. Biscuits’ primary component is wheat flour. Wheat flour includes gliadin and glutenin proteins. These proteins shape gluten in the presence of water. Gluten production, intensity and elasticity are primarily defined by processes of flour specification, formulation, mixing and shape.
Figure 2. Various Ingredients used for making delicious biscuits

4. Conclusion
The present invention provides an edible jar that can accommodate low-viscosity liquids for long periods of time and that can be put on a flat surface without assistance. One feature of this design is watertight, edible jar. One embodiment of this edible container consists of an edible dehydrated food sheet shaped into a jar capable of retaining liquid for lengthy periods of time without leaking and capable of being hand held; an opening in that container; and a flat base capable of stabilising that container in an independent position. The dehydrated food sheet can consist of dehydrated fruit or dehydrated vegetables, including a handle and a lid.

Another function of the invention is to produce a watertight edible jar. One implementation of this process is the act of shaping a dehydrated food layer into a flat based jar, said opening tube, and
becoming able to retain liquid for long periods of time without leakage. The act of creating a watertight edible container may include actions of forming a flat base from a dehydrated food content, in which that base has a peripheral edge guided upward; folding a second sheet of edible dehydrated food, said second sheet having a creased edge and two wing edges; putting the second sheet above that base. In this research, it has been used various ingredients to make different types of materials of the cup to consume hot drinks. Various authors mentioned different types of materials can be used but there are several limitations in their process.

In paper based cup, the cost of manufacturing is low but it cannot be used again. Some researches clearly mentioned that the process of decaying paper takes some long time. The chemical and glue which is used in the process of making the paper cups, that leads to several health hazards. In Plastic cup, the chemicals and process involved in making the cup is low which causes the deadliest disease to the consumers. Even though the price of paper cup and plastic cups ate to low, it may cause some health relates issues while consuming hot drinks. And also in biscuit cup, the manufacturing cost is little high but it will be very good for health and it will provide additional benefits to the consumer to enhance the new experience.

This review examined some potential methods of producing edible cups. It is expected that potential studies would use processing methods to make edible cups for both common people and diabetic patients in compliance with their needs. While fabricating biscuit cups, we can use our own ingredients to have hot drinks or cold drinks which depends upon the consumers taste. Even we can add different flavors to make edible cups more tasty.

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