

THE COMMERCIAL PROJECT

DEVELOPMENT PACK

**“You are what you eat, so don’t
be cheap, easy or fake” - unknown**

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CONTEXT



the commercial project gives 5 individual briefs from companies - outlining a specific goal and the framework under which it needs to be completed.

out of the 5 companies, I chose müller due to its focus on aesthetics on shelves and practicality on the go. whereas other briefs seemed to focus on one or the other. in addition to this, the testing of polymers and how they can be manipulated in products such as müller corners is an interest of mine.

this project tests theoretical and practical topics under a fast paced, commercial focus. the final result should be commercially viable and of a high standard.

BRIEF

design a new, innovative product that enables consumers to enjoy yogurt 'on the go' in an easier, more sustainable way than current solutions.

Products should be suitable for the existing müller brand portfolio (corner, light, rice. bliss) and be driven by the following criteria :

- consumer focused
- ease of use
- viable manufacturing considerations
- ease of disposal

MULLER NOTES

at the start of the project, David Tonkin - head of packaging innovation at müller gave a small presentation + q&a about the brief.

this gave some valuable information and tips that helped steer the direction of the project.

- the brand has 3 key values - taste, fun and quality.
- it doesn't appeal to a specific group - an 'everyone' brand.
- its consumer index has slight overindexes for females 20-30 (müller light) and males 18-30 (müller rice). however this is minor and should not be a focus for the design.
- for recycling, mono materials should be the only ones used. however current packaging used printing (does this affect recycling?)
- don't use wood in packaging or utensils, as it can heavily impact taste.
- glass is not preferred, as it doesn't work with current manufacturing protocol.
- müller has past experience with 'on the go' packaging - corner squeezers. this failed due to an issue with the manufacturing equipment (stay away from stick packs).



PACKAGING EVALUATION

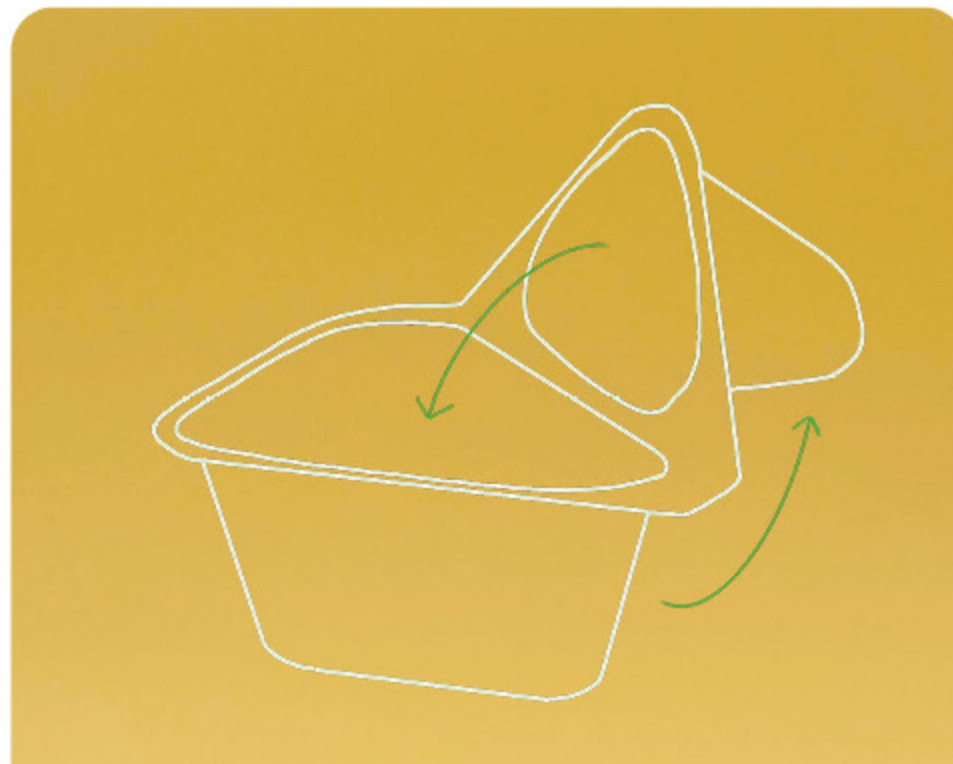


arguably the most iconic item within müllers product line is the corner. separated into two segments, yogurt and flavouring - the consumer snaps over the corner to combine the two.

the two values of fun and taste followed by the brand are incorporated. the tactile experience is a unique element which lets the user engage with their snack. With the flavouring separated, crunchy elements like the flakes or malt balls keep their texture.

a staple of lunchboxes, it could already be considered an 'on the go' product. however when using the product it becomes clear its not something that can easily be eaten in a majority of environments other than a dining room or household.

- can't be used when walking or without both hands
- needs a utensil, which may cause additional mess when packing away
- lid detaches from product, often making for awkward situations trying to find a place to put it.
- size and form factor make it difficult to eat on a commute.



CORNER





LIGHT



RICE

light and rice are similar products in relevance to being 'on the go'. both are virtually the same in both packaging and use, single containers that requires the consumer to manually mix up the yogurt before eating. this is likely due to the ingredients of the yogurt separating over time, which is something that should be considered when designing products for these lines.

the downfalls of corner also apply to these products, due to their similar size and virtue of it being a container for yogurt.

when designing for rice, the ability to microwave the product and its high viscosity are important things to consider.

light is also available in a smaller form factor similar to bliss. these both come in 4 packs of transparent cups. The flavour of the product appears to appeal to a higher age range, indicating that the overall brand appeals to everyone, but certain flavours or product lines can attract different types of people.

LIGHT (S)



BLISS



MATERIAL USE

all of müllers yogurt products are made from PET, this is due to its ability to be thermoformed and its food safety. making it perfect for a mass manufactured food product. in addition, PET is recyclable - with müller currently aiming to use rPET in much more of its product line.

the products also have a die-cut aluminium foil lid, which is also recyclable.

multi pack products often have no additional labelling, as it's included on the multi pack container itself. however single packed corners have paper labelling on the side, with rice, light and bliss also containing printing directly onto the packaging.

its unclear however if printing directly onto the product will affect its 'monomaterial' status, or make a substantial impact to environmental friendliness.

the use of PET and aluminium is unsustainable with current recycling infrastructure, generating a large amount of emissions due to the primary use of virgin material.

foil lids and paper labelling make the product inconvenient to recycle for the average consumer, if possible a single material product should be considered.



PRIOR ATTEMPT

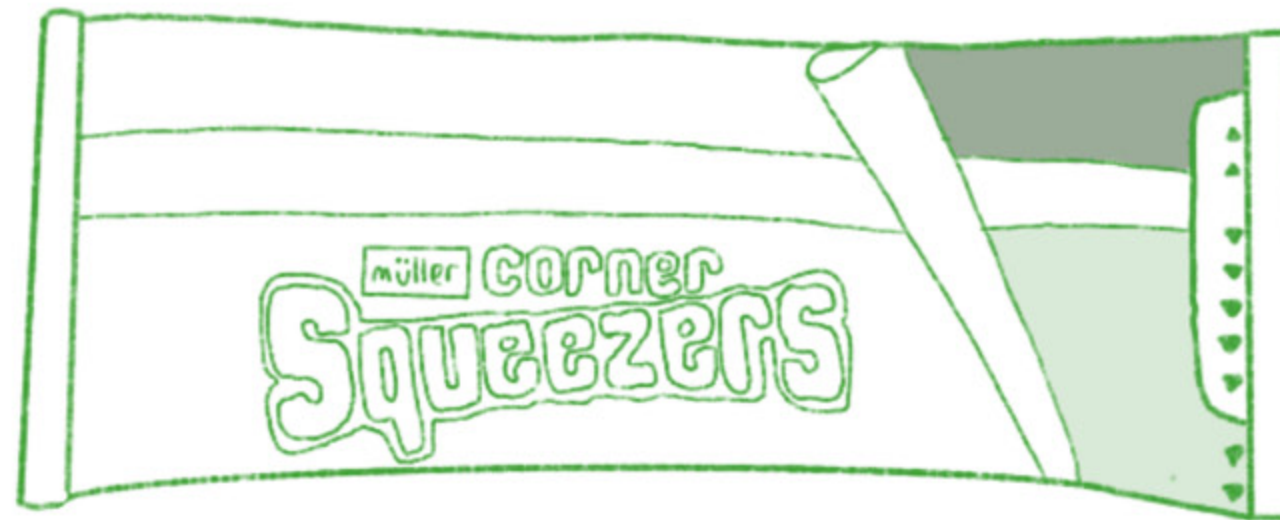
in 2002, muller made an attempt to enter the 'on the go' section of the yogurt market. mirroring 'frubes' which had made its entrance 7 years prior, they came in polymer stick packs, which could be used to squeeze out the yogurt.

setting themselves apart from frubes, it used a dual pack design, with one containing fruit flavouring and the larger containing the yogurt itself. this kept both the taste and fun elements muller, and especially the corner branding were known for.

although there is very little information about it, the product seemed to be fairly succesful, reaching 15% of the handheld yogurt marketshare in less than a year.

leveraging "the power of mullers corner brand into a handheld portable version in a spoonless format", the product may have achieved long term success, with its main consumers likely being children who chose it over frubes.

however this came to an end shortly after it began, as the "first of its kind" machine that manufactured the product broke and it never returned to shelves. given that frubes have now had nearly 30 years to cement themselves as the market leader, head of packaging innovation David Tonkin made the express rule that stick packs shouldn't be used.



AREAS OF IMPROVEMENT

- find solution to the utensil issue - people don't plan their day ahead far enough to bring a utensil for a yogurt they may or may not have. the product needs to contain a way of consuming the yogurt without it.
- the packaging has to have an element of sealability, people will throw the packaging back into their bag if there isn't a bin nearby. it can't spill once used.
- it needs to be convenient to use without a surface, either with use one handed or with a grippable surface to comfortably use a tool.



PET polymer



aluminium foil



card laminate



basic shapes, cuboids and cylinders
simplicity > complexity

CONSUMER RESEARCH





müller currently seeks to expand into the high street

after becoming the market leader for home consumption, müller has still yet to successfully find a place in the morning coffee run, the meal deal selection or the tradesmen's snack venture.

the brief of 'on the go' is intended to fit this very market.

current opportunity for expansion

23%

the market share for müller yogurt in the uk

5.7
billion

total revenue in 2019 (€)

17th

largest dairy company in the world

27
thousand

employees worldwide

OVERVIEW

office workers - how can the product be more appealing to someone grabbing lunch or a coffee?

commuters - is there a way to make it easier to eat on public transport?

considered to be an 'everyone' brand, appealing to every type of person.

CONSUMERS

school children - often have muller products included in their lunchboxes

is there a way to make it more fun and less messy for children?

trades workers - will eat muller products on the way to a job site, either outside or in a vehicle.

is there a way to make it so you can eat the product without a surface to put it on?

home use - is there a way to design the product that may make it more useful at home? e.g. whilst gaming or watching a movie



user profile : hannah
age : 31
status : married, owns a home
occupation : stay at home mother
children : 2 - ages 9 and 7

suitable use case



when packing the school lunch for her two children, hannah often finds her children lose their spoons or bring them back dirty.
“it’s annoying to constantly be buying new spoons and cleaning out their lunchboxes.
my children won’t eat any other brand and I need a solution that isn’t removing dairy from their lunches altogether.”

issues

- cutlery keeps going missing
- cutlery returns dirty
- must be suitable for lunchboxes
- must be easy for child to understand and use

goals

- convenience - quick and easy
- cleanliness
- easy to dispose

opportunity area

this user does not fit mullers current area of expansion, as they are likely to purchase their product from larger supermarkets.
however their concerns about portability and cleanliness can be applicable to all users.
as an ‘everyone’ brand, this user should be considered but not focused upon.



user profile : daniel
age : 16
status : lives with parents
occupation : student
children : none

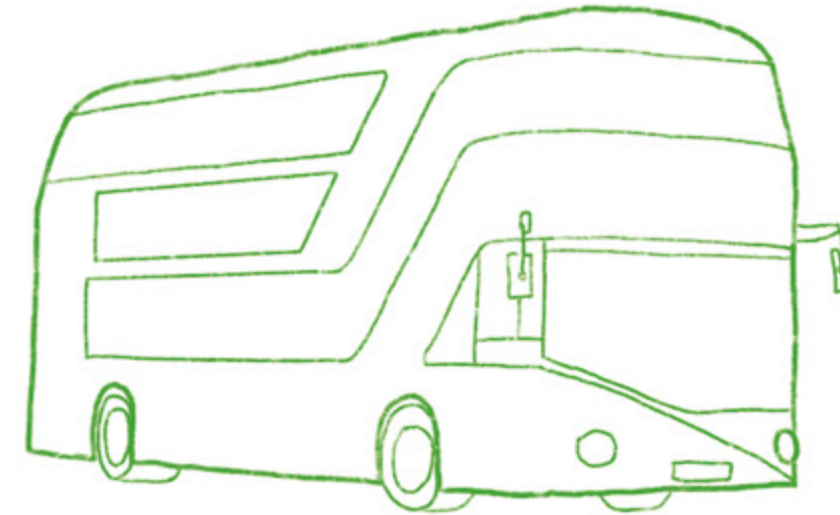
issues

- difficult to find a snack to eat on the commute
- feels embarrassing to eat yoghurt on the bus
- difficult to keep hold of packaging for long periods

goals

- inconspicuous
- convenience - quick and easy
- cleanliness
- easy to dispose

suitable use case



daniel struggles to fit breakfast into his morning routine, as a result he'll often pick up a snack to eat on the bus.

he sees yogurt as the perfect breakfast option, however hes often embarassed eating it on the bus and has to hold onto the packaging for the remainder of his journey.

opportunity area

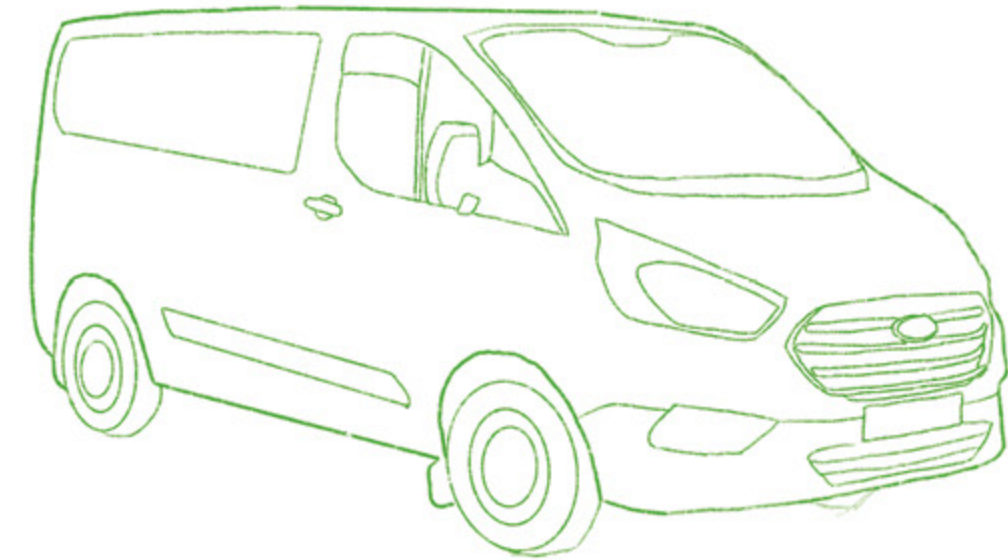
this user fits the 'grab and go' project aim, however their interests seem to lie more in an issue that may not be widespread and a deviation from the brief.

holding onto the product after its been consumed should be considered however.



user profile : dan
age : 27
status : single, rents a 1 bedroom
occupation : boiler specialist
children : none

suitable use case



on the early commute to work, dan passes by a corner shop near his house to grab a drink and a snack for breakfast.

he's constantly stuck with products like breakfast bars and pre cut fruit.

"I need something to eat either at the job site or in the car that I don't need a kitchen set up to eat."

issues

- lack of cutlery
- lack of surface to eat from
- difficult to eat with one hand
- must be easy to eat without pre planning

goals

- one handed
- doesn't require cutlery
- intuitive

opportunity area

this user can represent multiple types of people e.g. office workers.

the profile fits both the brief and area of expansion.

MARKET RESEARCH



ENVIRONMENT OF SALE



one key point of sale for muller is the meal deal aisle.
being a key place where the chosen consumer will be browsing and finding products to have
'on the go' it will need to break into this space.

other than brand recognition, unique packaging is one of the key ways of getting the consumers
attention. when looking down the meal deal aisle of a store like tesco, i noticed that key brands
such as monster or coca cola stand out due to their unique, tall shapes and bright contrasting
colours.

when trying to develop the product, shelf space and its presence on it should be a key factor of
the final design.

SKYR

skyr is a yogurt product that appears to market itself as health conscious. the large image of fruits, next to a "fat free" label is used to display to people wanting a healthier alternative when sourcing a convenient snack.

its pouch design is similar to that of baby food, even including the large, easy to open cap.

although the design is extremely convenient to use, with it solving almost every issue of portability and use on the go, ultimately there is a stigma of childishness behind food products in pouches.

- extremely convenient to use one handed and to dispose of after use.
- not environmentally sound, with a separate plastic cap
- poor visual appearance, resembling baby food. further exploration of pouches as a form is needed



NOMADIC

unlike skyr, nomadic explicitly presents itself as an 'on the go' product. with the name itself being a person who lives on the move, and the main image showing someone walking whilst carrying a bindle.

similar to corner, it has 2 separate sections which are combined to keep the 'crunchy' element from becoming soft. after use, these sections can be re-attached to prevent the yogurt leaking when transporting the waste.

it solves the issue of utensils by including a single use folding polymer spoon. although its an effective in eliminating the pre planning and waste that a portable product requires, its an extremely wasteful solution.

lastly, it's extremely inconvenient at the point of use. once opened it splits into 4 different elements which need to be assembled, it is impossible to use the product without a surface.

- wasteful, mutliple single use polymer parts.
- convenient to carry whilst on the go, not to use.
- re-seals to reduce mess in bags after it's been consumed.





logo : white
no. ffffff



logo : red
no. dc1918

background: blue
no. 253167
(gradient)



flavour colours
no. 88431a
cb8332
d7ceb2
f0a5c9
e32737



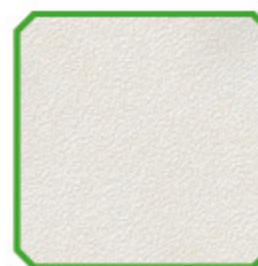


primary user - tradesperson



requirements :

- can be eaten outside, on the go, with no utensils
 - intuitive design, should be simple to use
- (as an 'everyone' brand, it should appeal to no specific person, but should still be suited to the most extreme example)



PET polymer



aluminium foil



card laminate

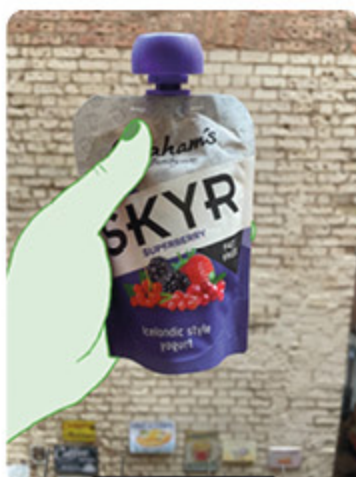
current packaging is somewhat sustainable, and uses recyclable, mono-materials.

however more research is needed to find more sustainable solutions

RESEARCH SUMMARY



- needs to use as few parts as possible, convenient and easy to use.
- needs to stand out on the aisle, form needs to be appealing.
- needs to be easy to dispose of cleanly

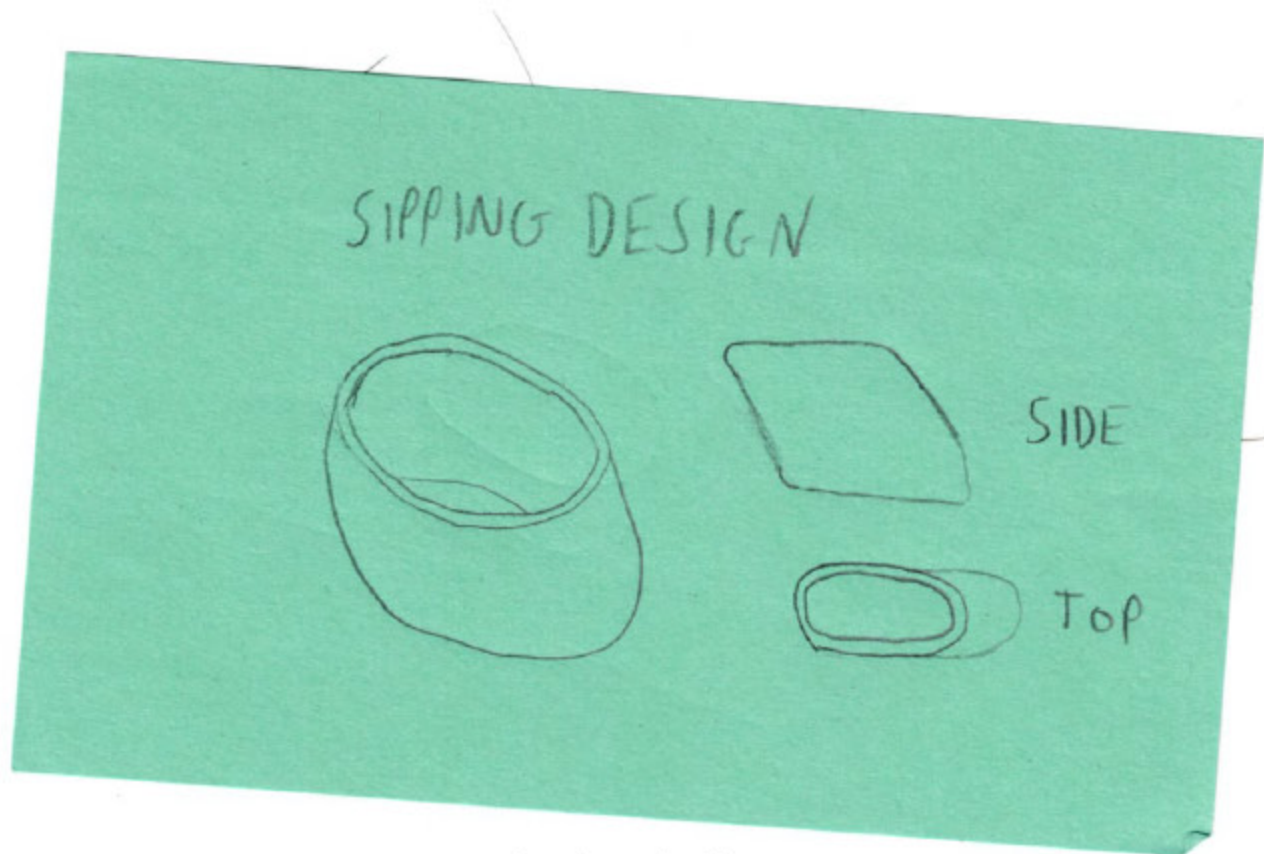


- must stay true to muller brand
- use simple shapes and curves
- bright bold colours, blue and red.

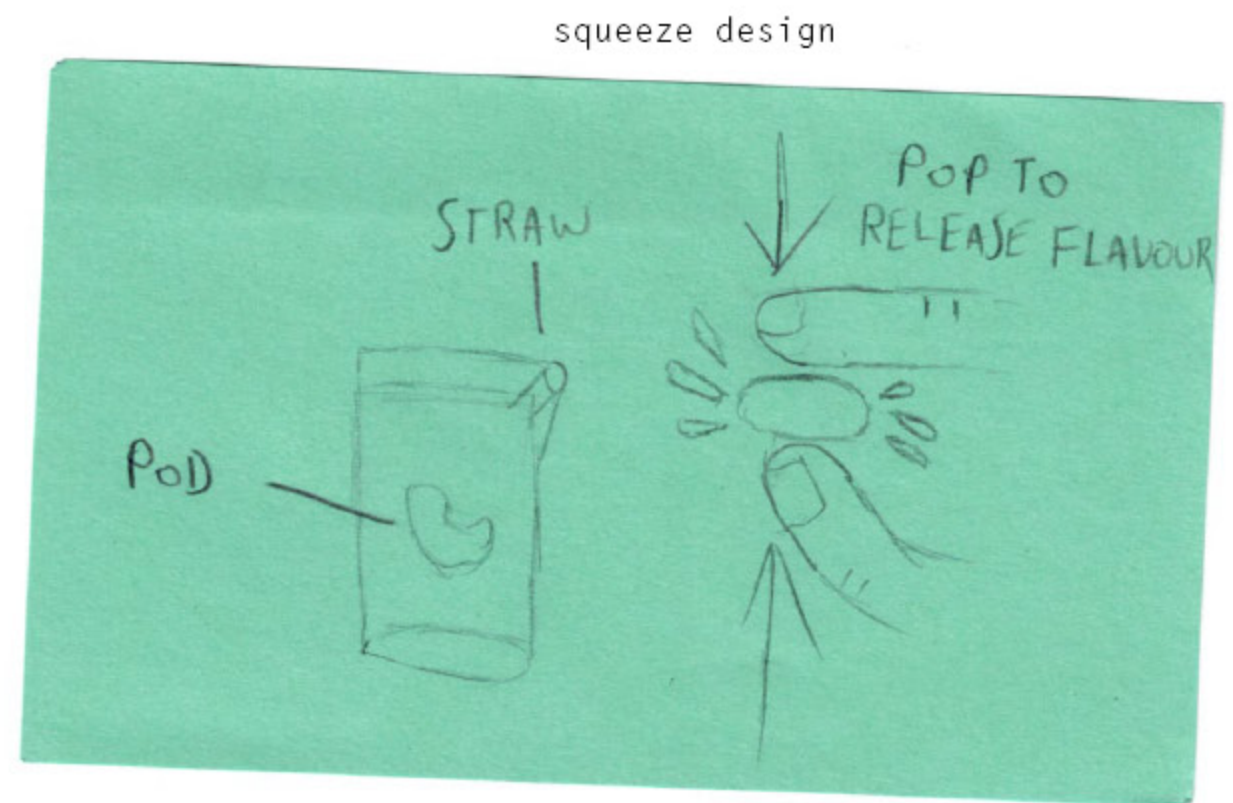
REFRAMED BRIEF

DESIGN AN 'ON THE GO' YOGURT POT, THAT HAS A UNIQUE SHELF APPEARANCE AND CAN BE USED WITHOUT PRE-PLANNING.

INITIAL SKETCHES

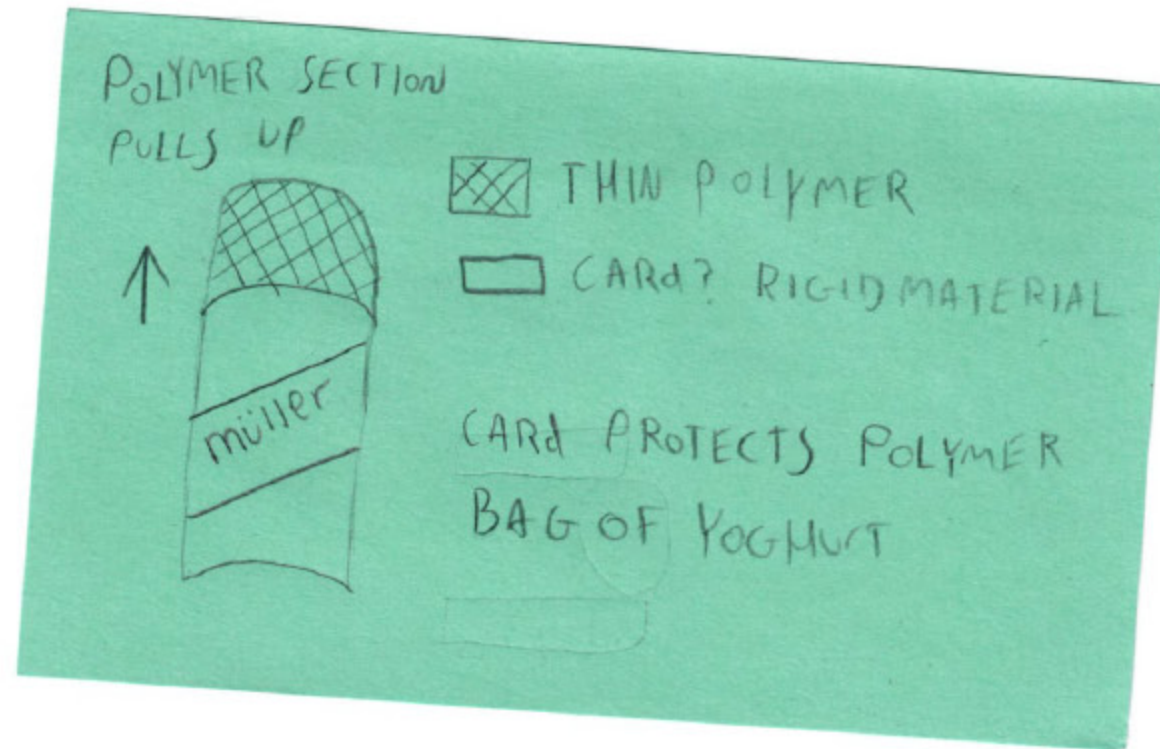


sipping design



squeeze design

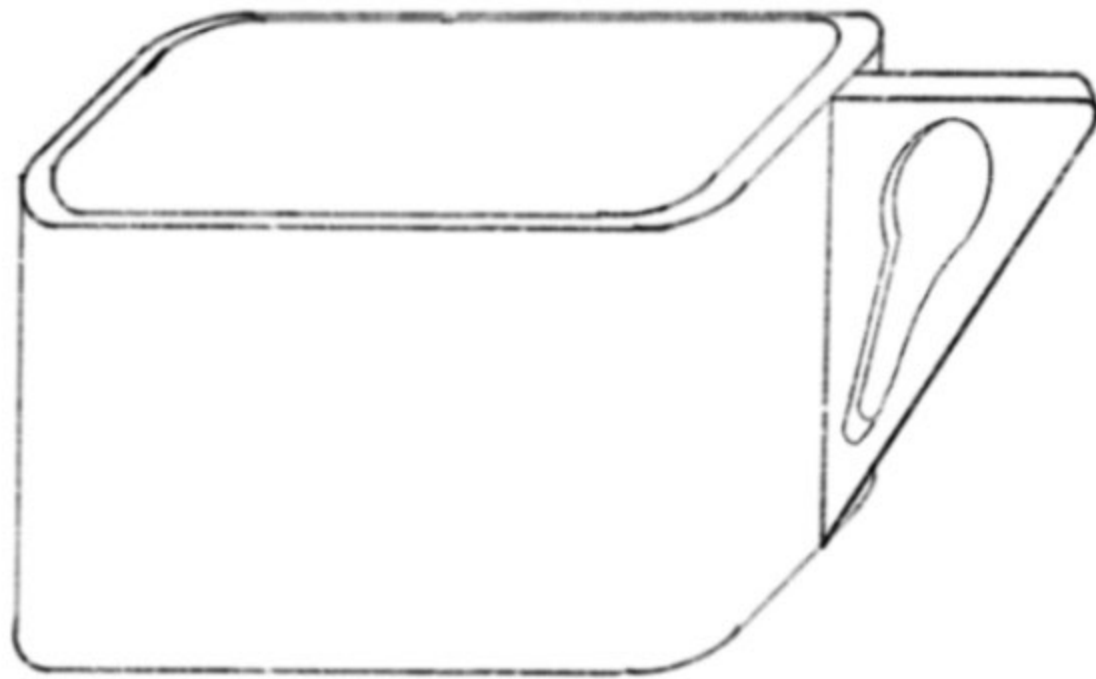
HONDURAN WATER PACKS



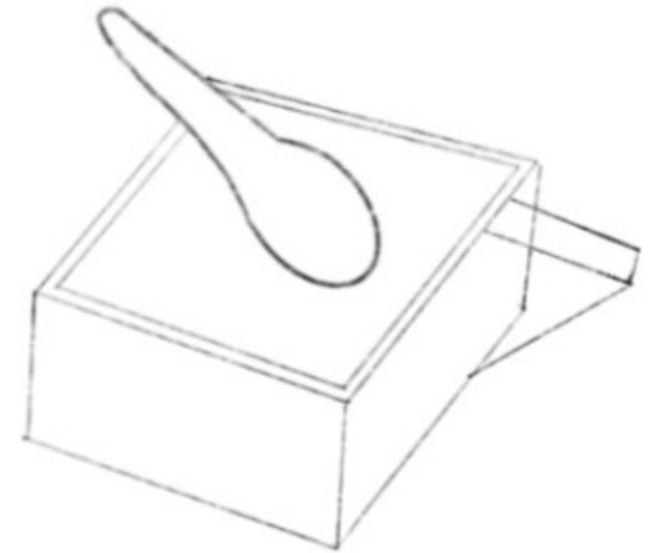
water packs can be found in countries such as honduras and have began to make their way into events such as marathons or concerts. they're an extremely material efficient way of storing and transporting liquids, requiring only a thin layer of plastic which can be bitten into to release the contents



this design takes that concept and uses it to transport yogurt, featuring a small cardboard sheath to protect it in bags and to add additional shelf presence. it can be pushed up to reveal the yogurt and bitten into.

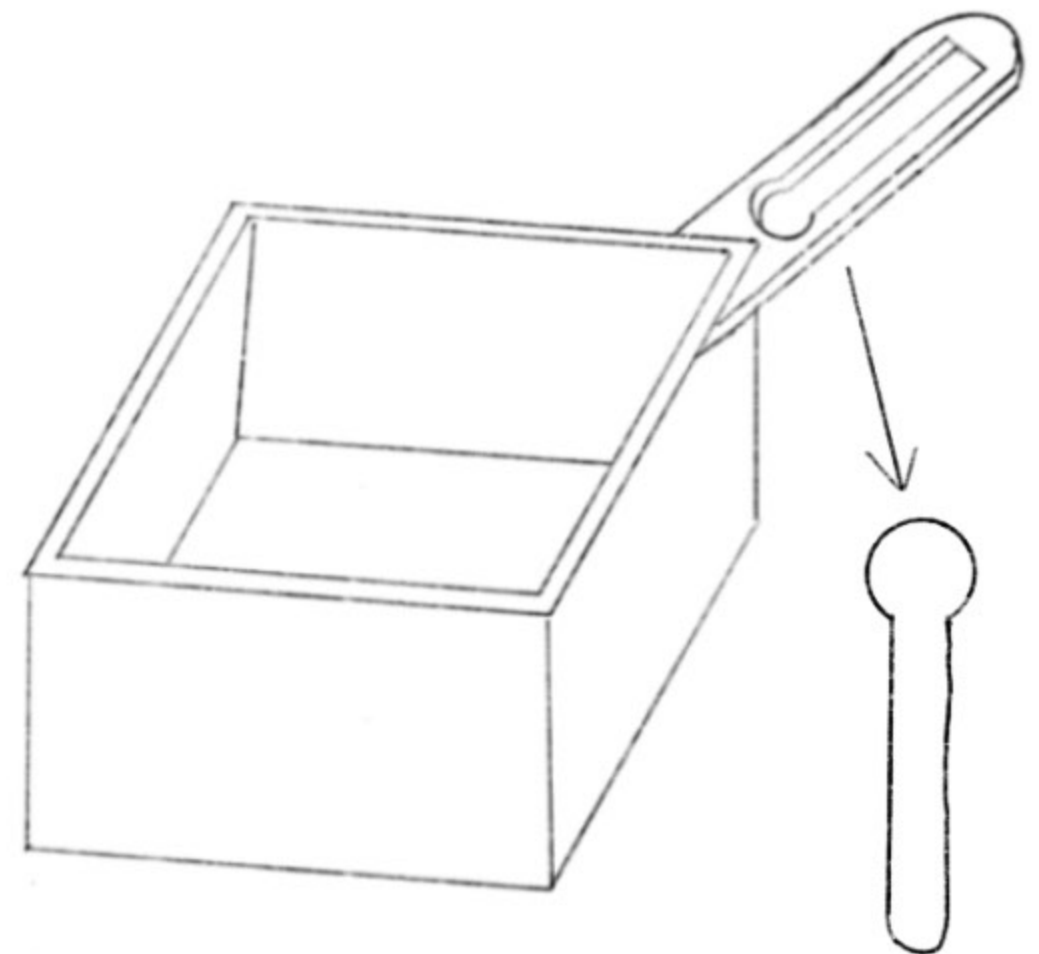
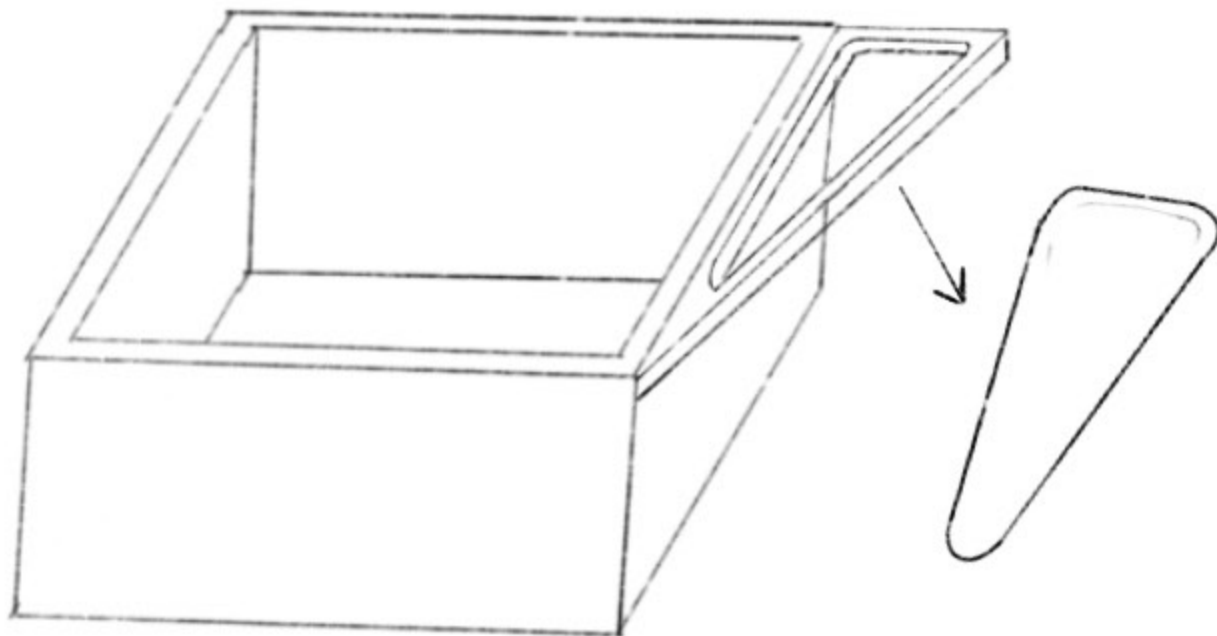


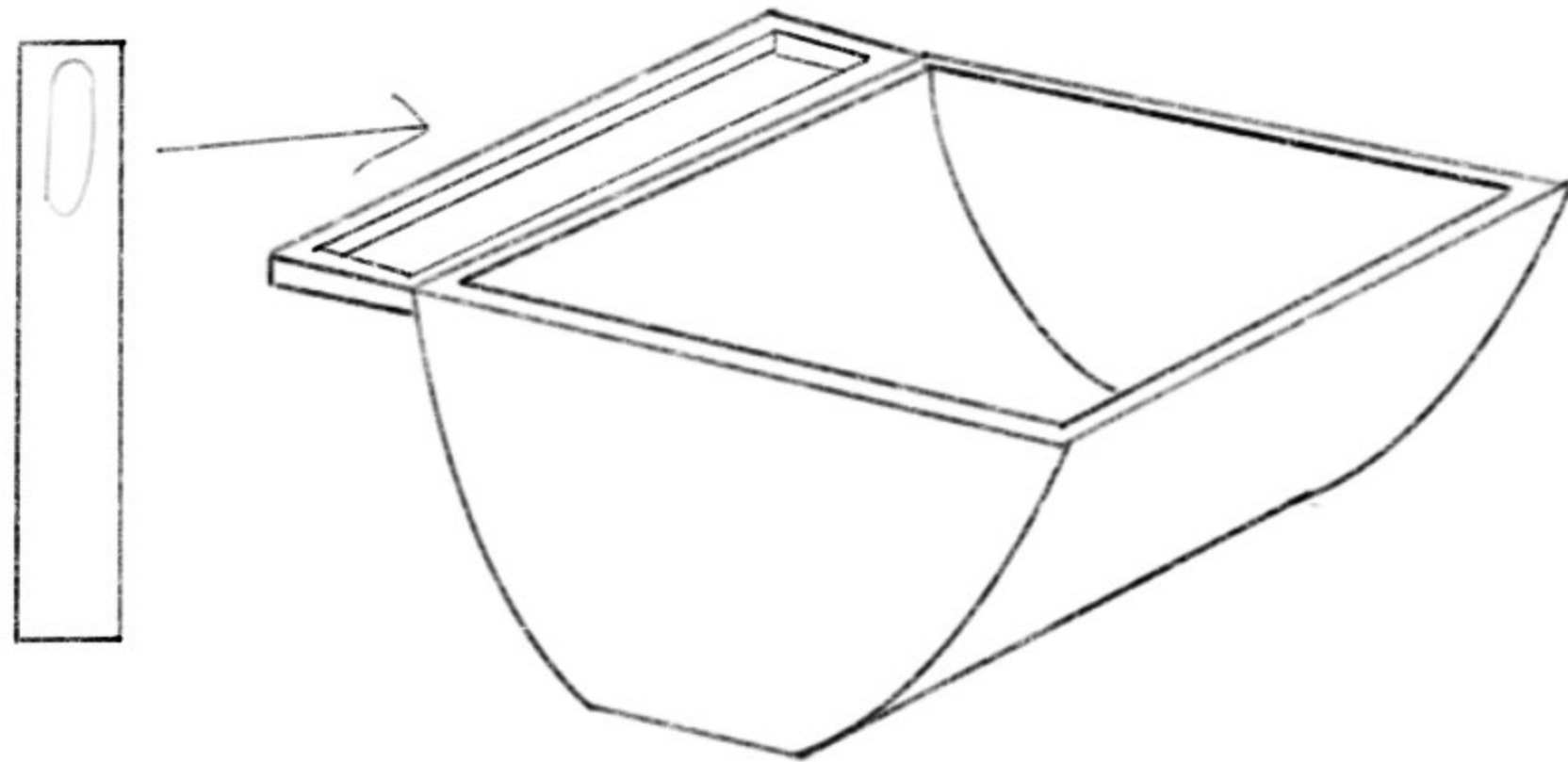
HANDLE CONTAINS CUT-OUT UTENSIL



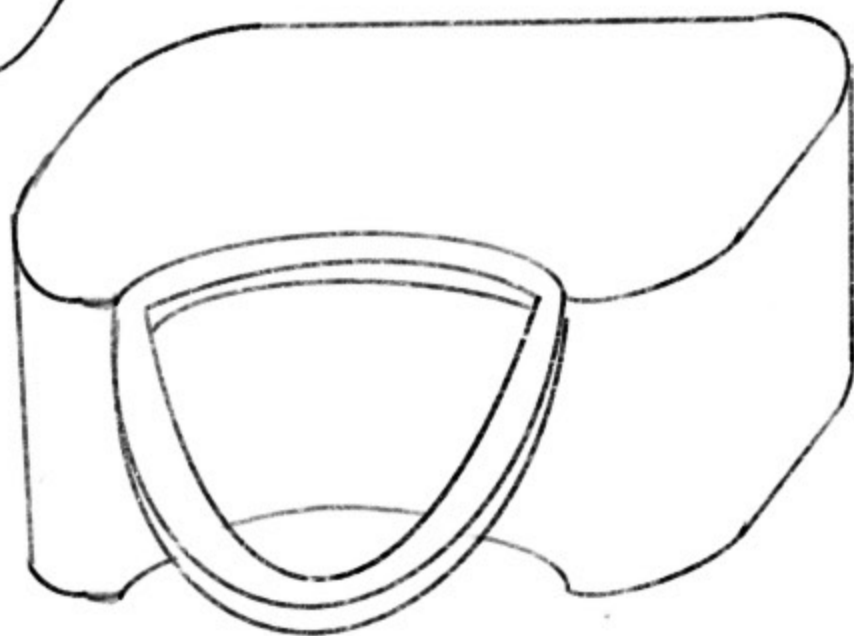
HANDLE IMPROVES
USE W/O SURFACE

DOESN'T REQUIRE
ADDITIONAL MATERIAL

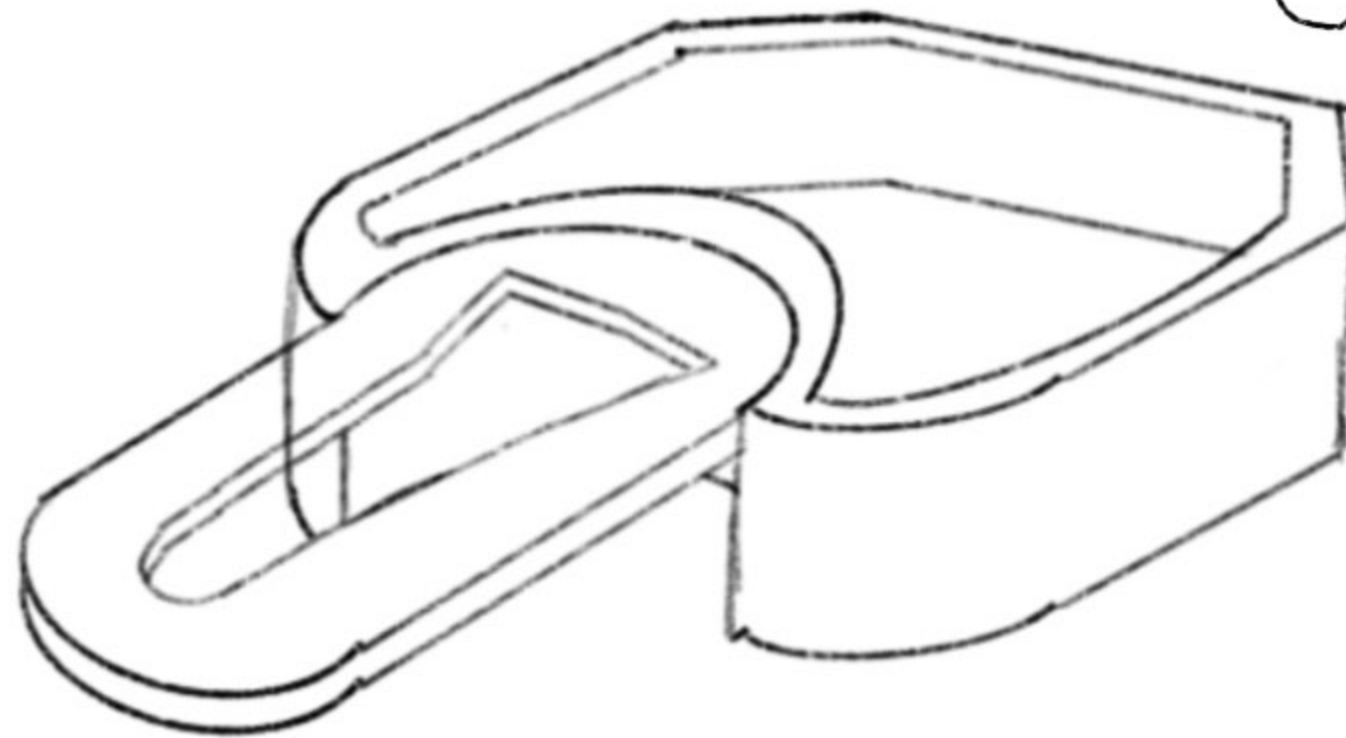




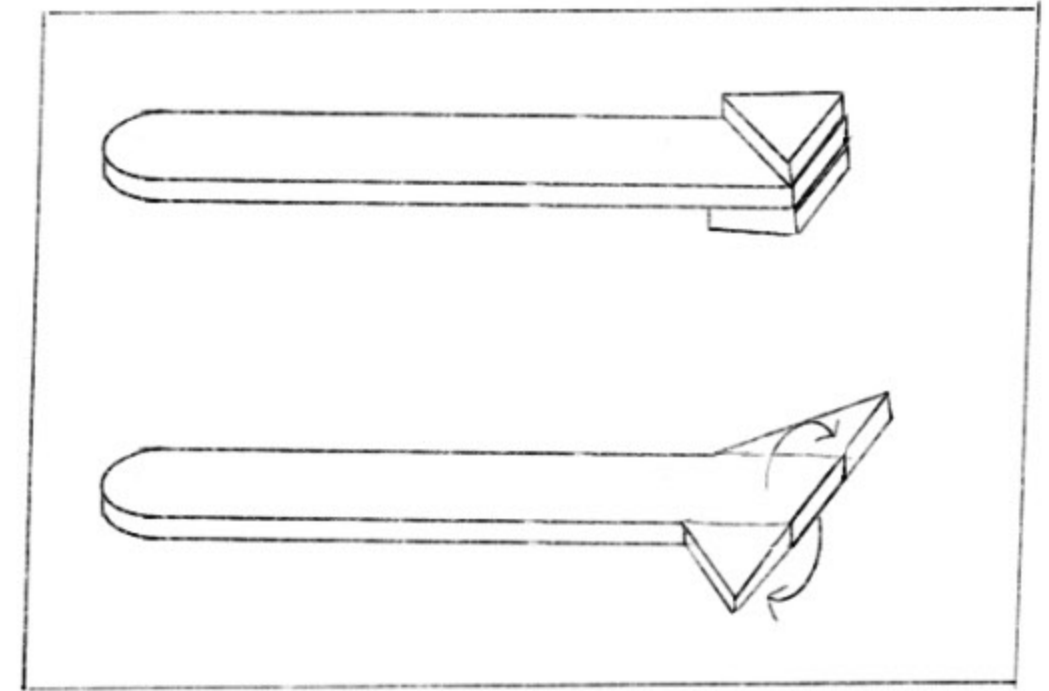
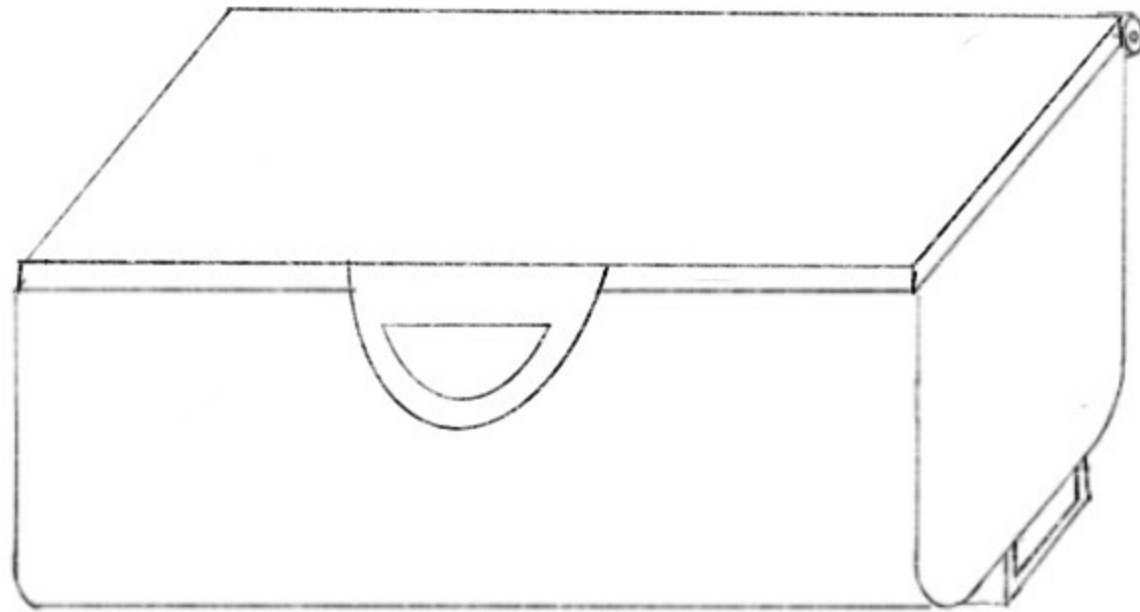
TORTILLA
CHIP DESIGN
FOR SPOON



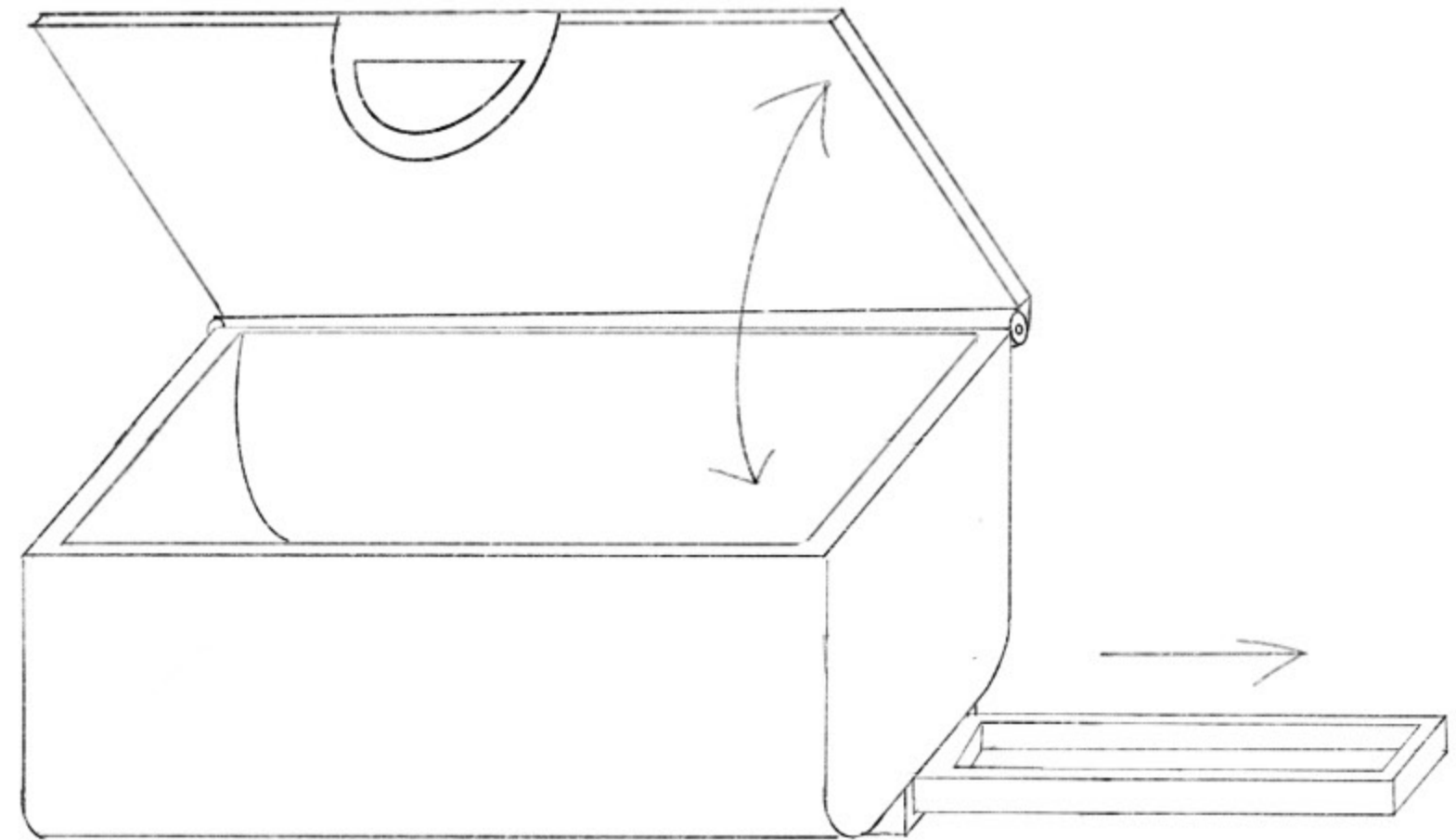
ICE
SCRAPE
DESIGN

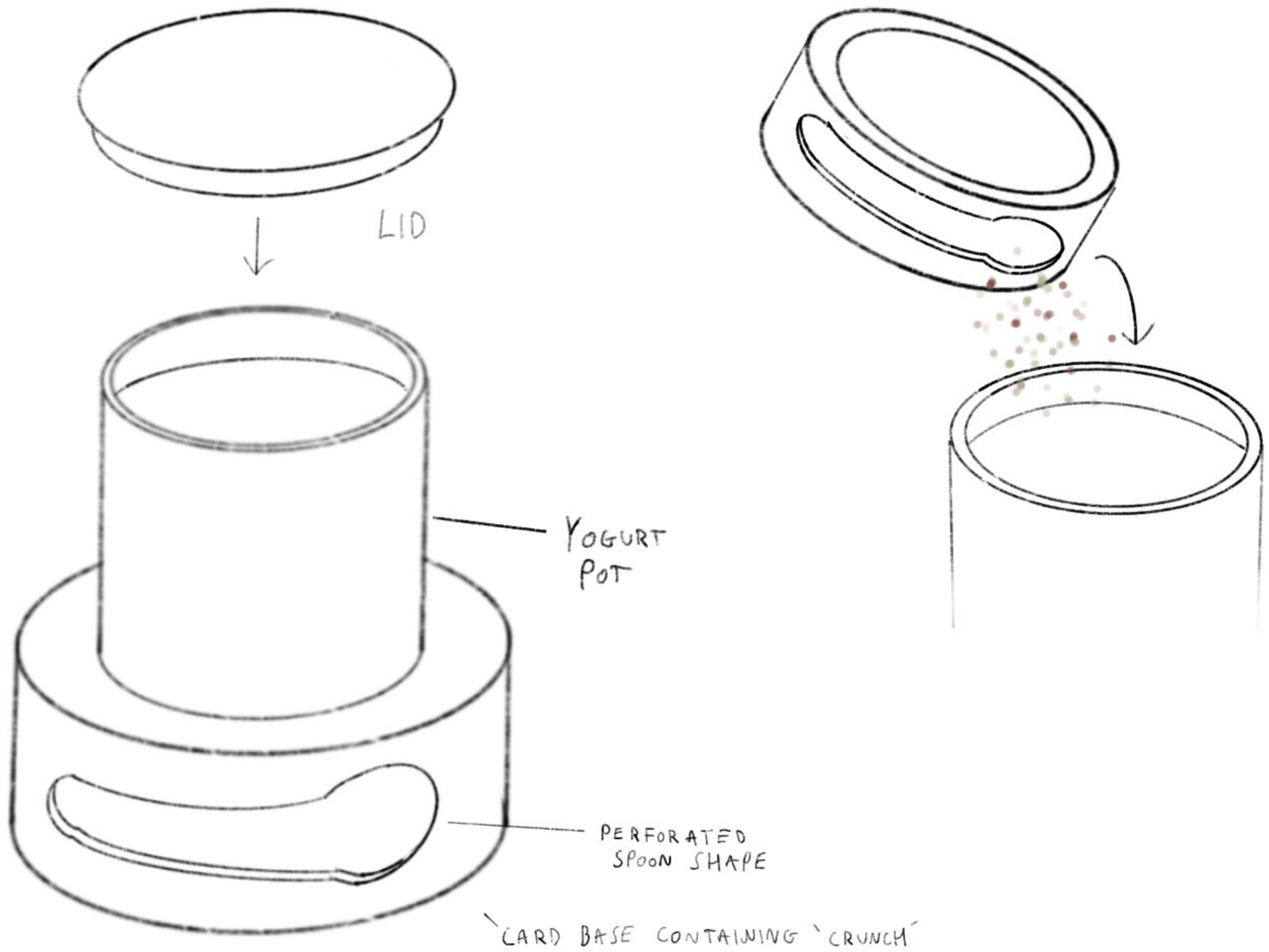


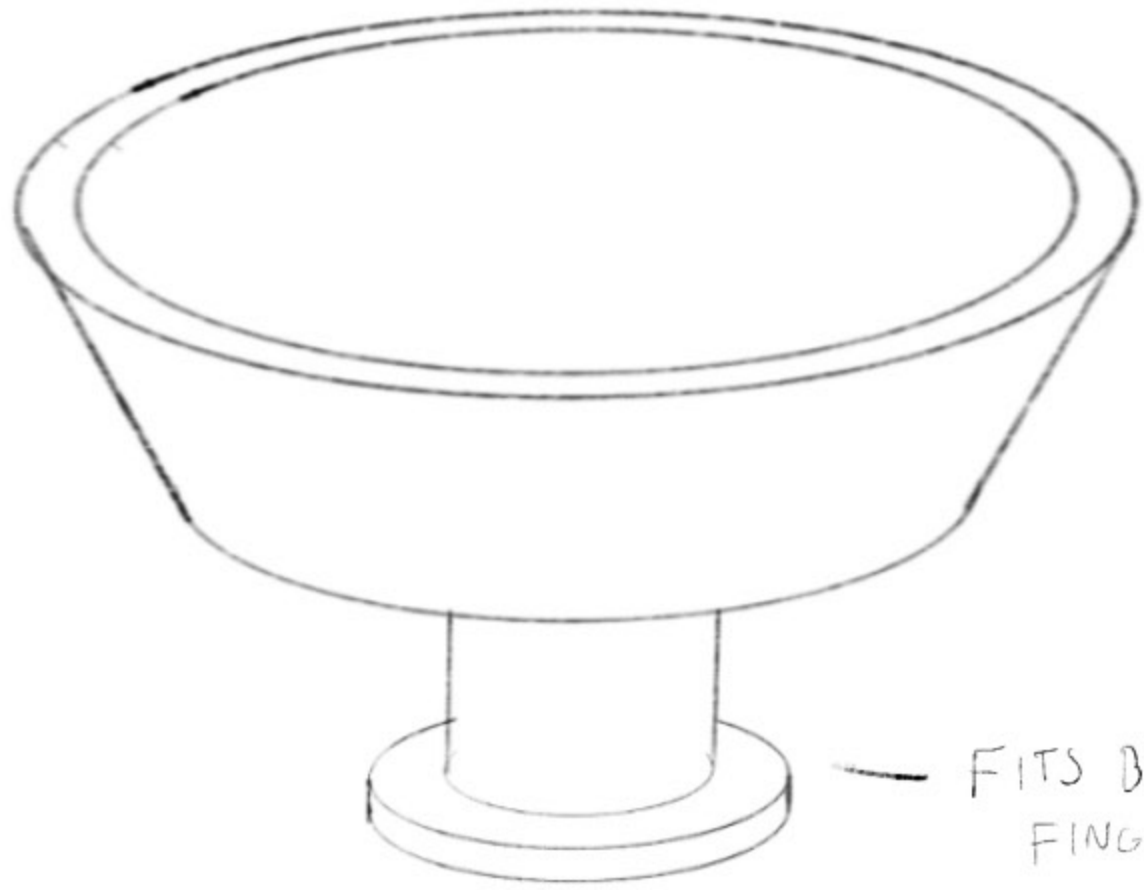
LATCH DESIGN



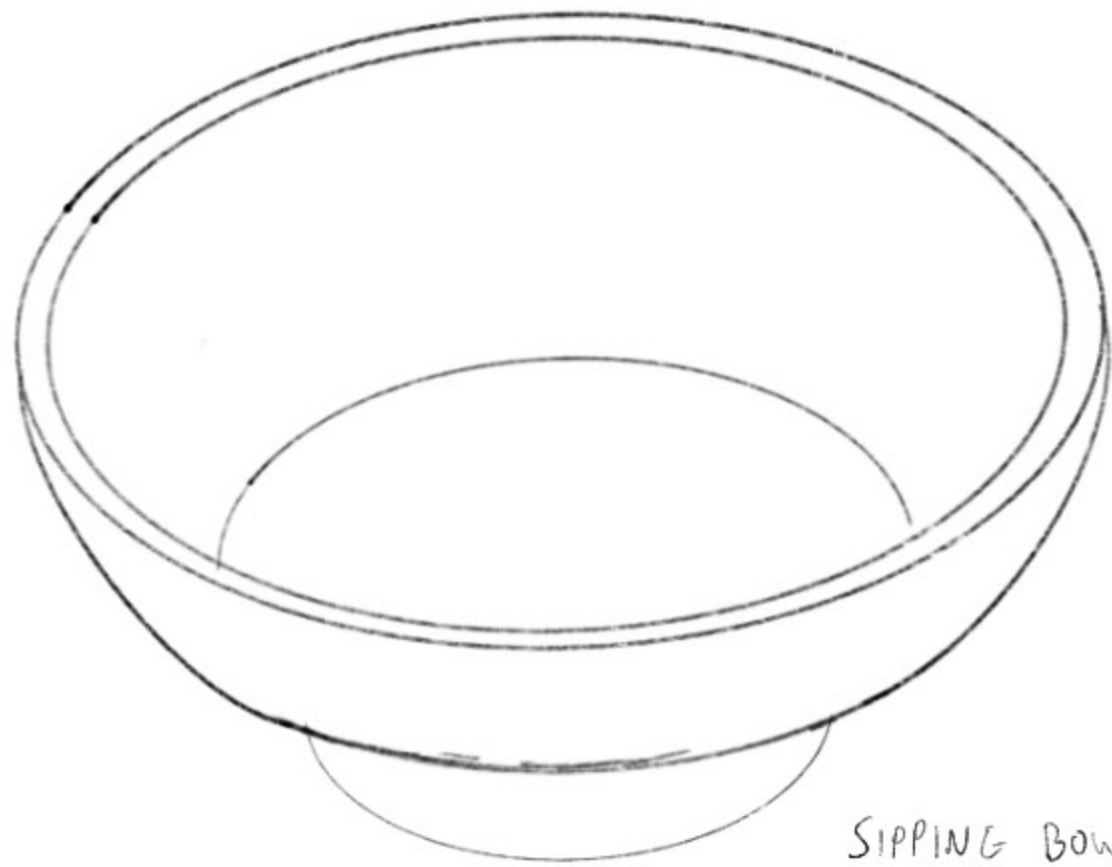
FOLDING CUTLERY



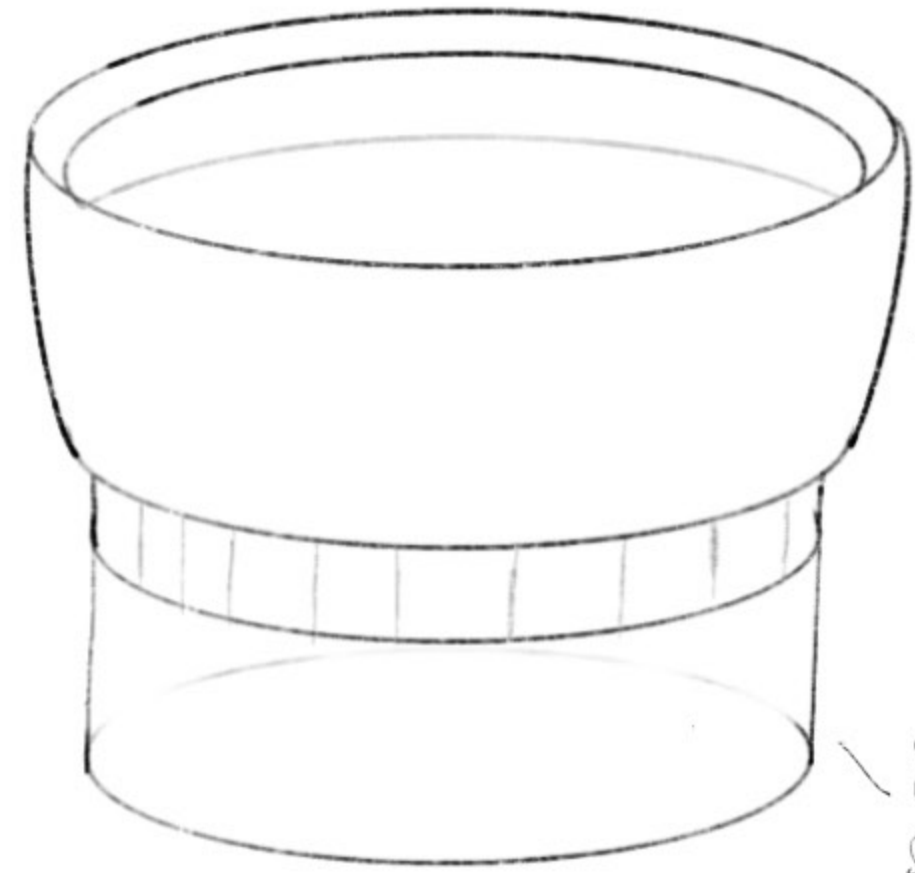




FITS BETWEEN FINGERS



SIPPING BOWL



YOGURT

CRUNCH SECTION

SCREW OFF

TAPE MEASURE DESIGN

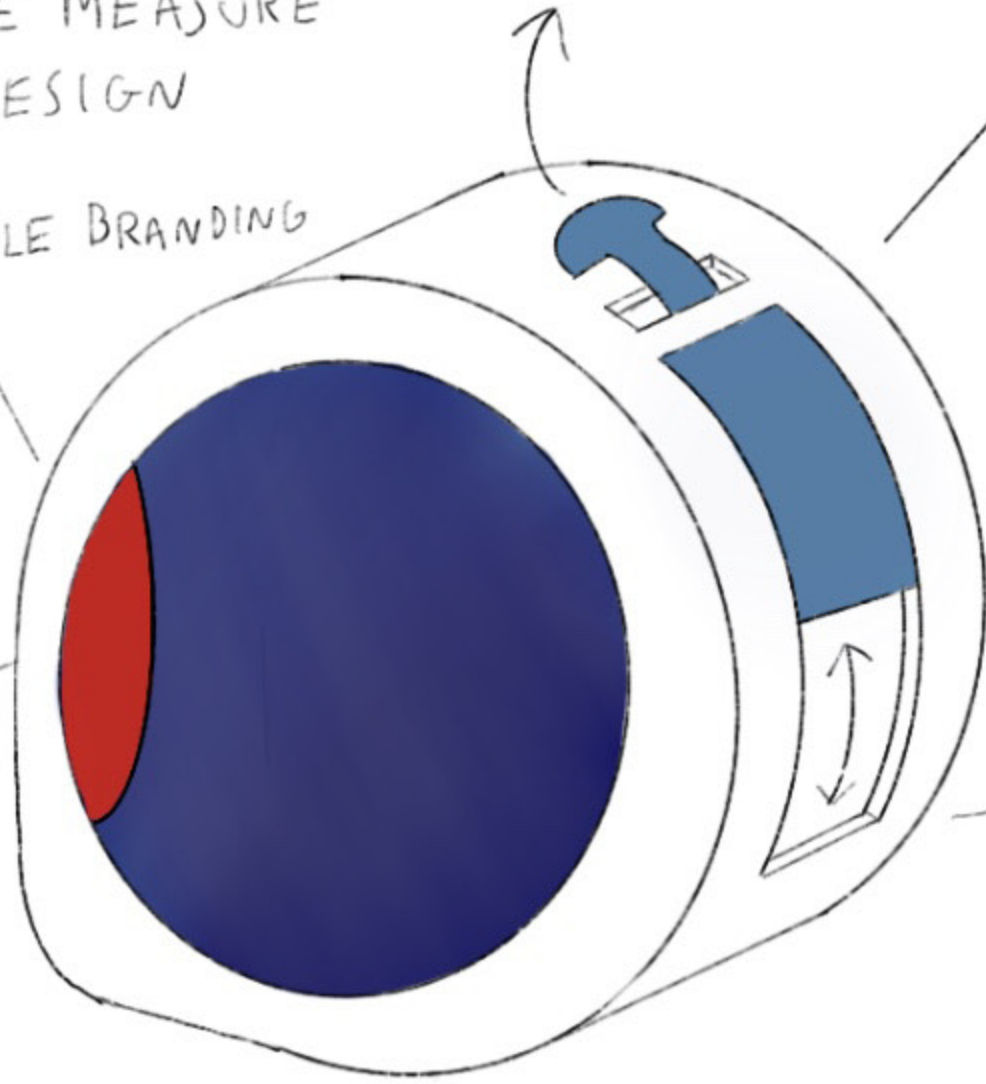
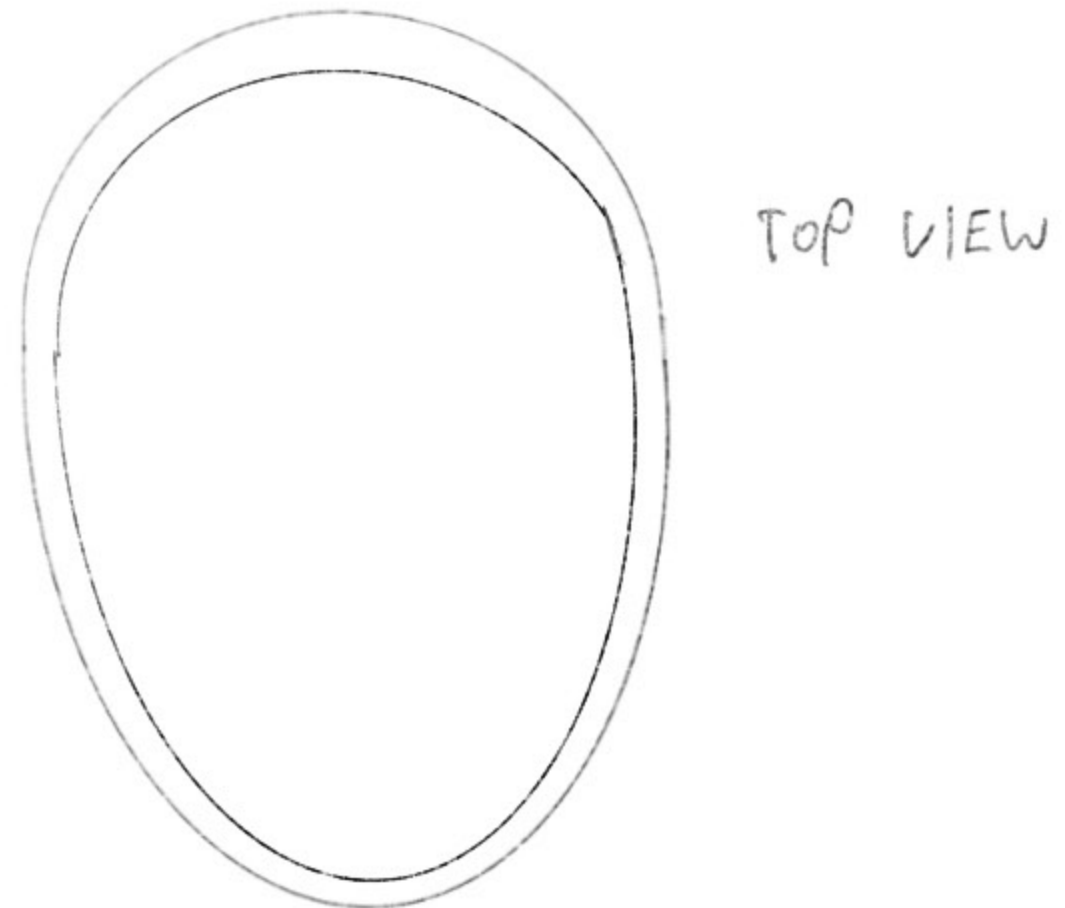
POSSIBLE BRANDING

HOW WOULD THIS SEAL?

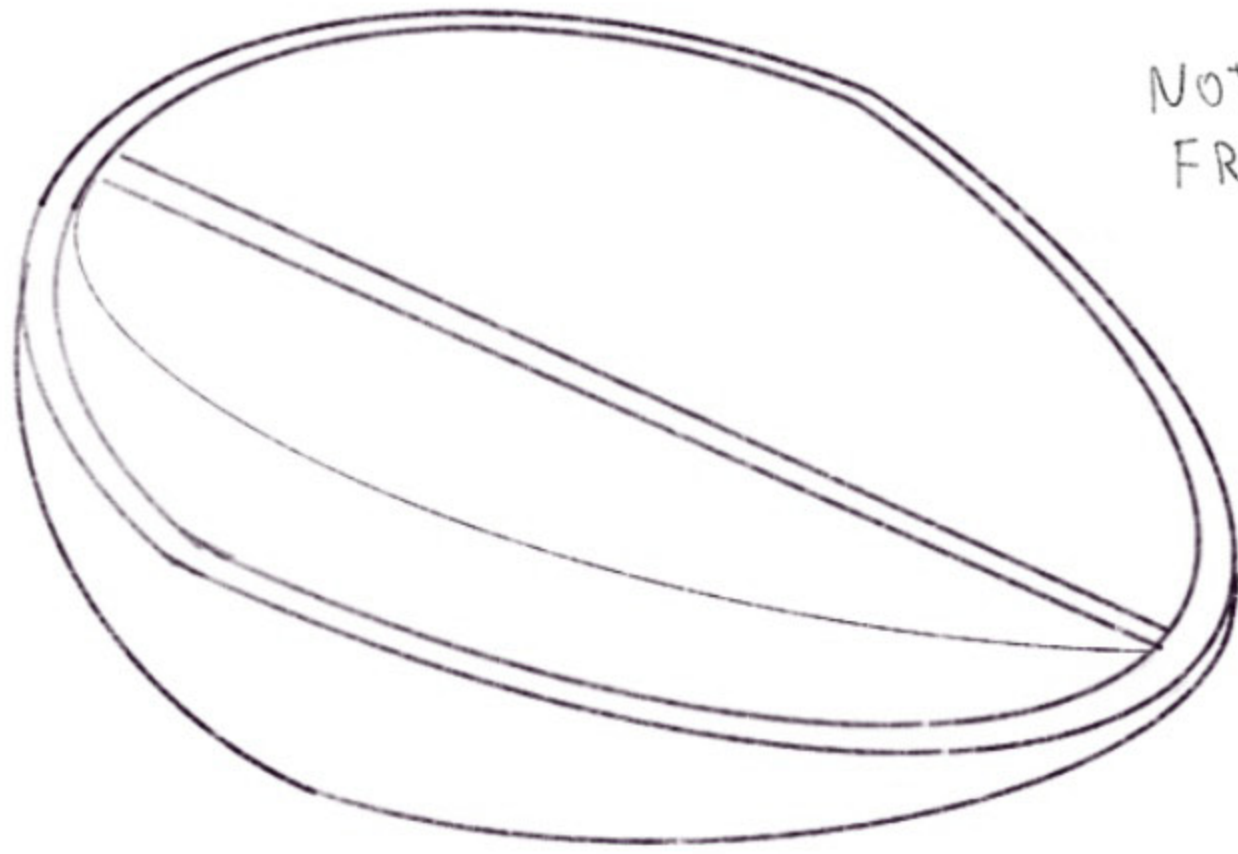
FLAVOUR

SMALLER SLOT SHAPE?

SLOT OPENS TO DRINK YOGURT



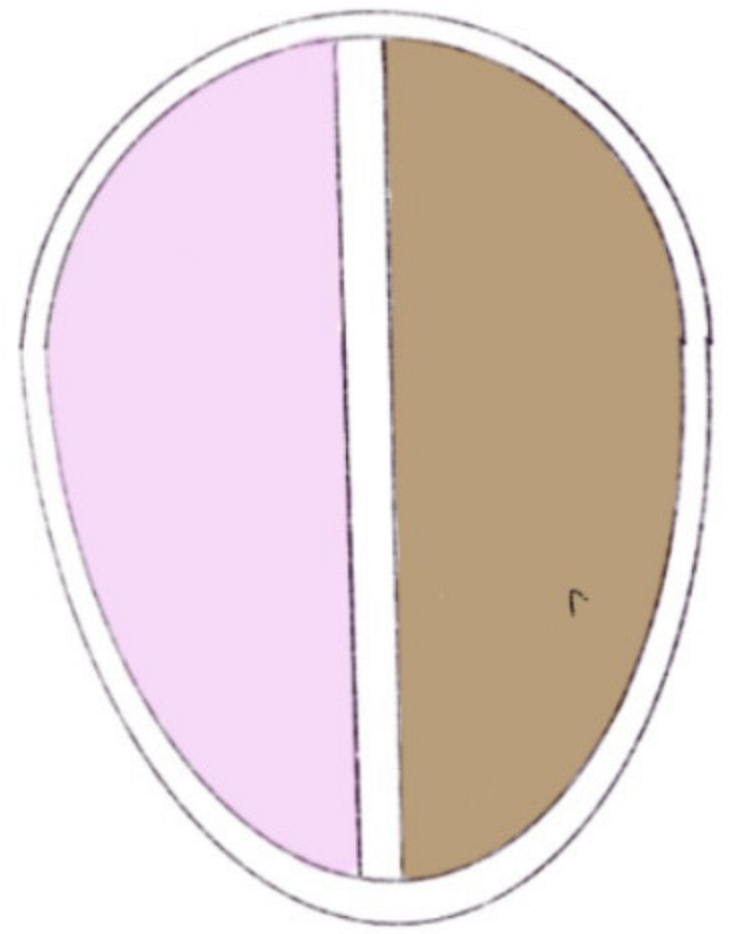
DUAL OYSTER

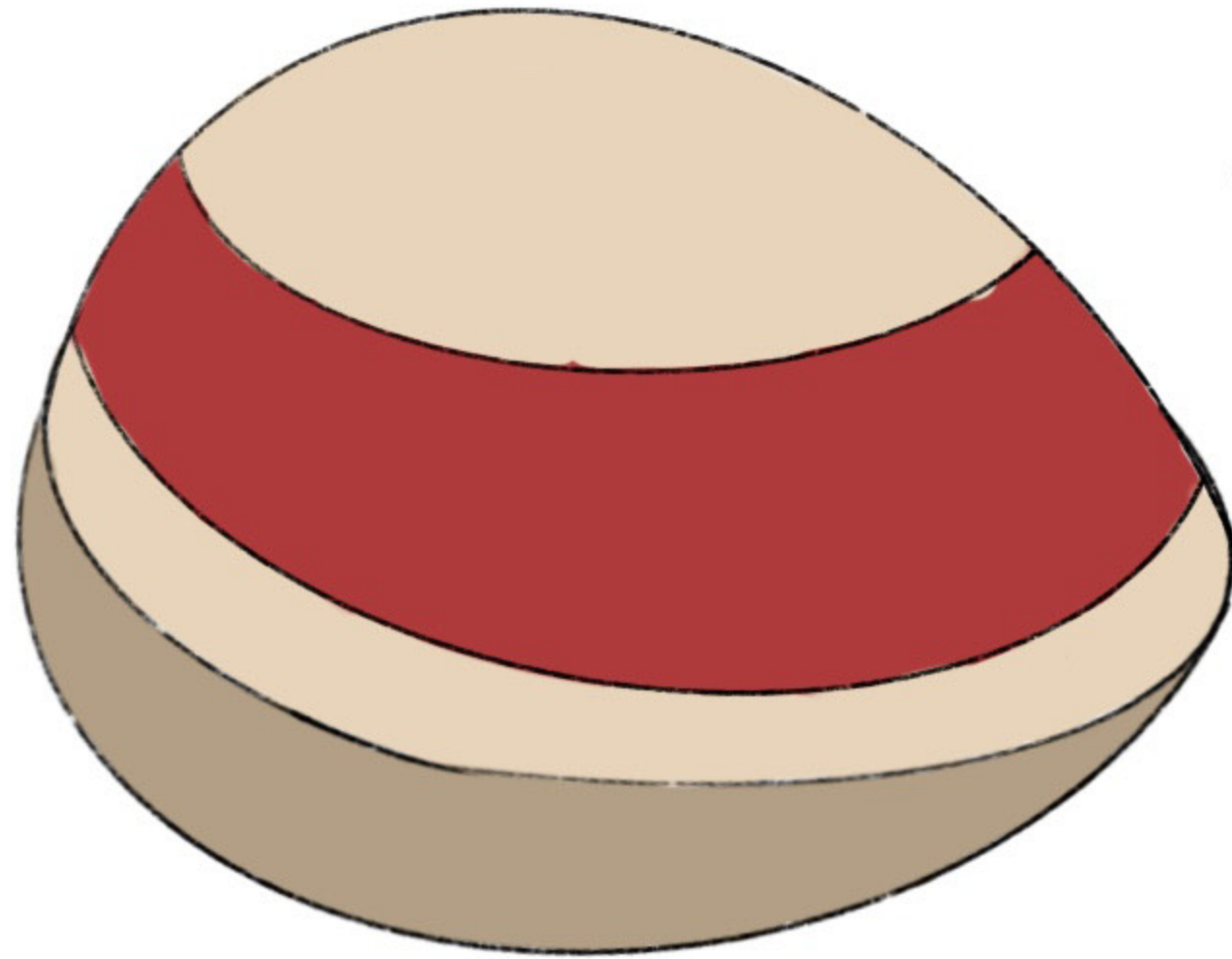


NEEDS HOLE

NOT USER FRIENDLY

2 FLAVOURS

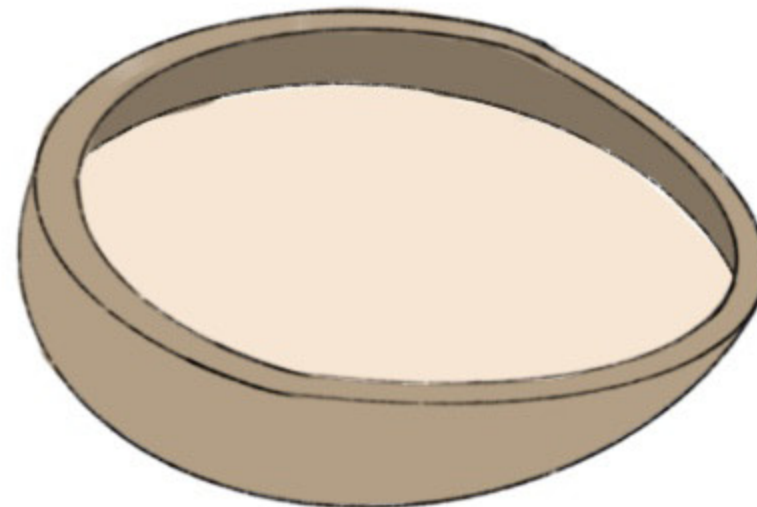
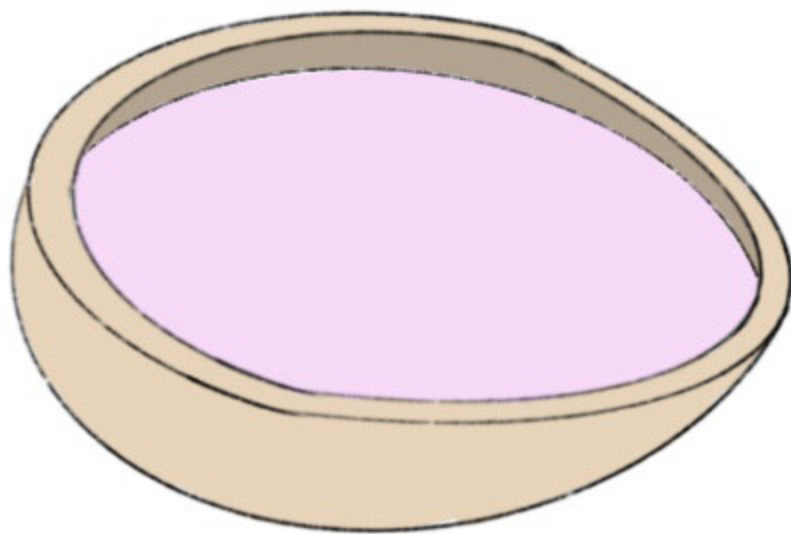




SPLIT
OYSTER
DESIGN

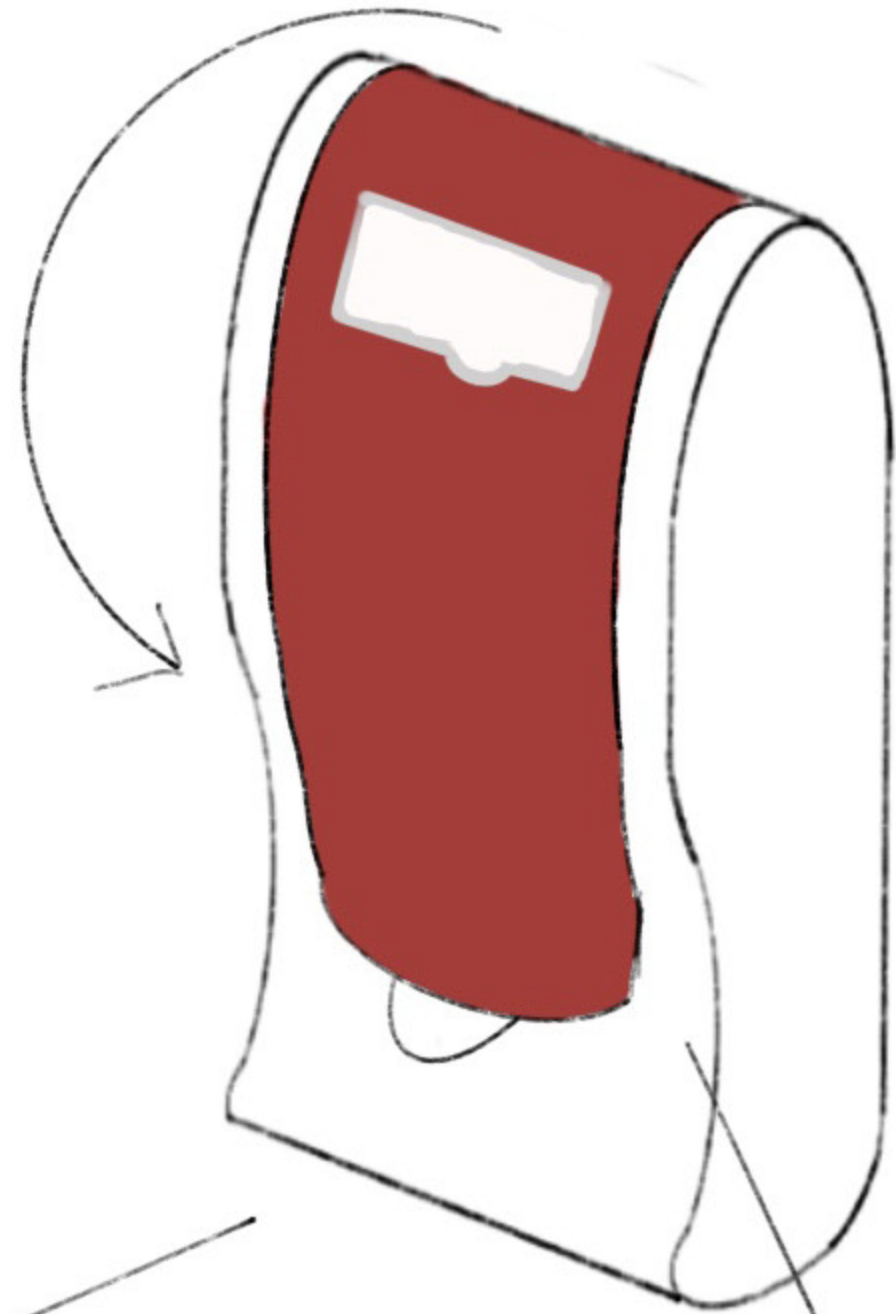
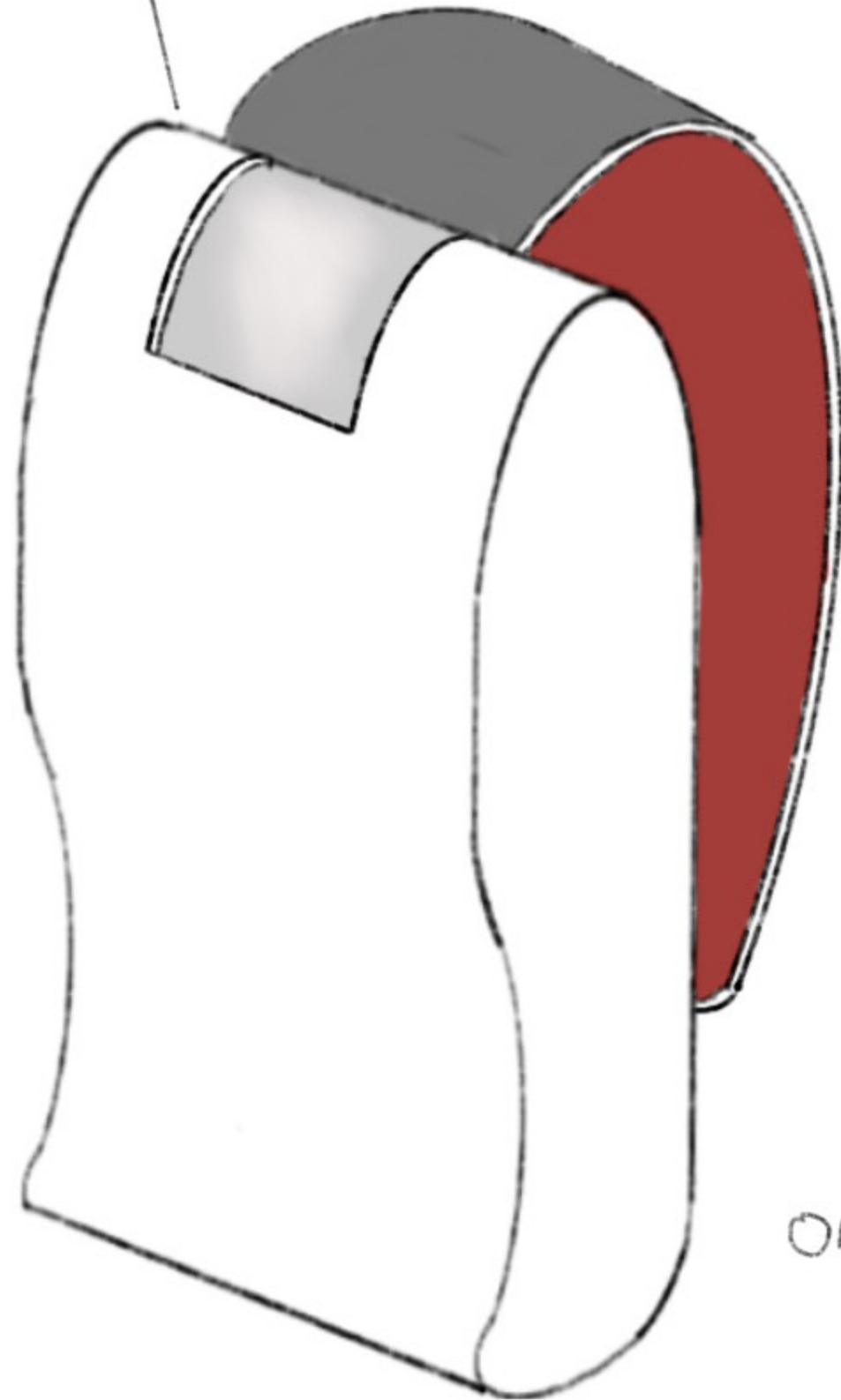


SPLITS IN TWO



SEPARATE
FLAVOURS FOR MIXING + SHARING

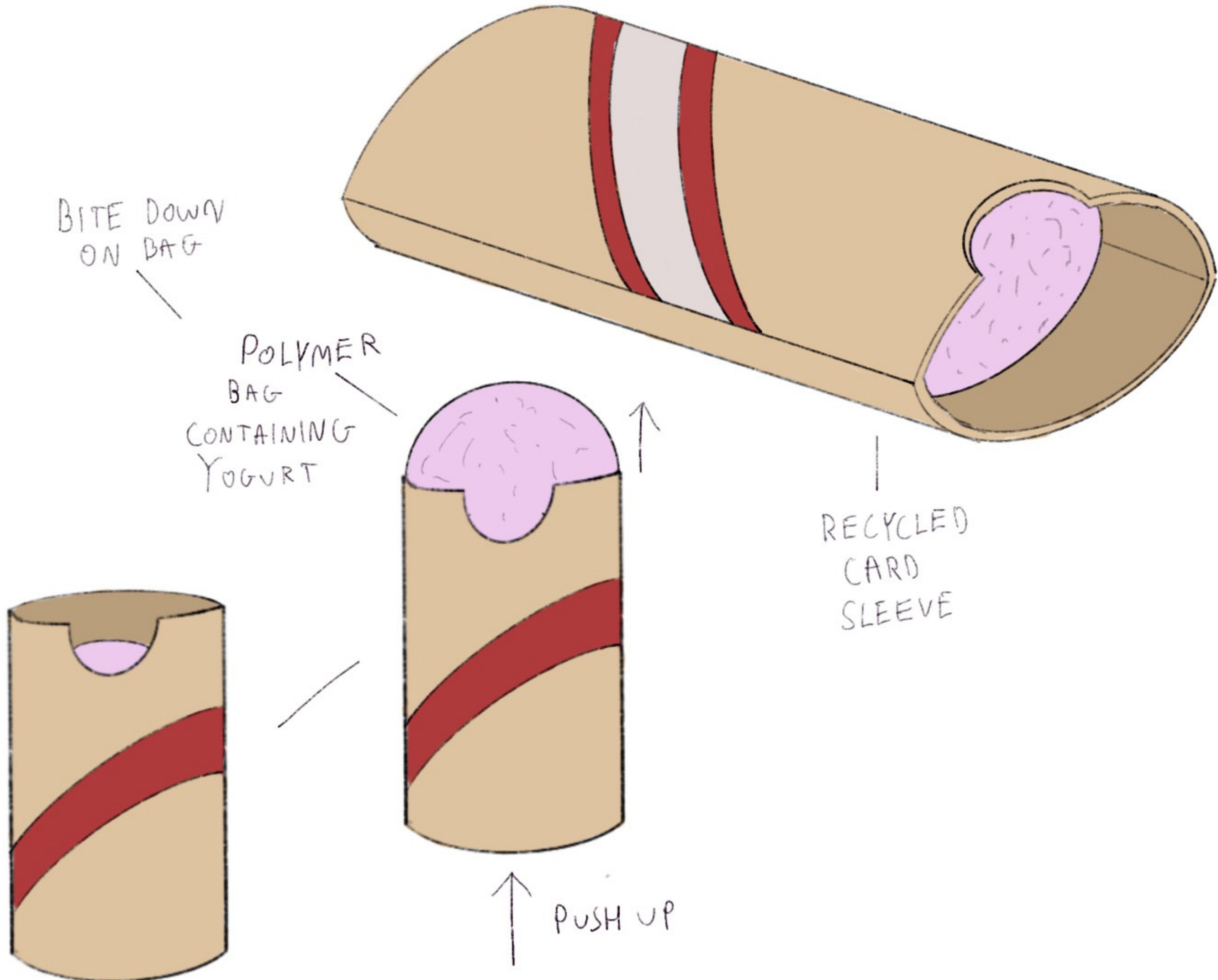
SLOT FOR DRINKING



CLOSING
MECHANISM

ONE HANDED

ADHESIVE ?



BITE DOWN ON BAG

POLYMER BAG CONTAINING YOGURT

RECYCLED CARD SLEEVE

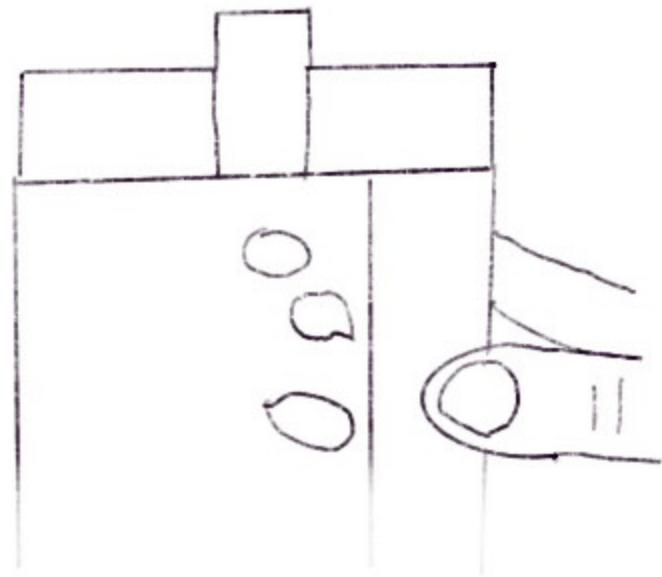
PUSH UP

müller GO

müller
MOVE

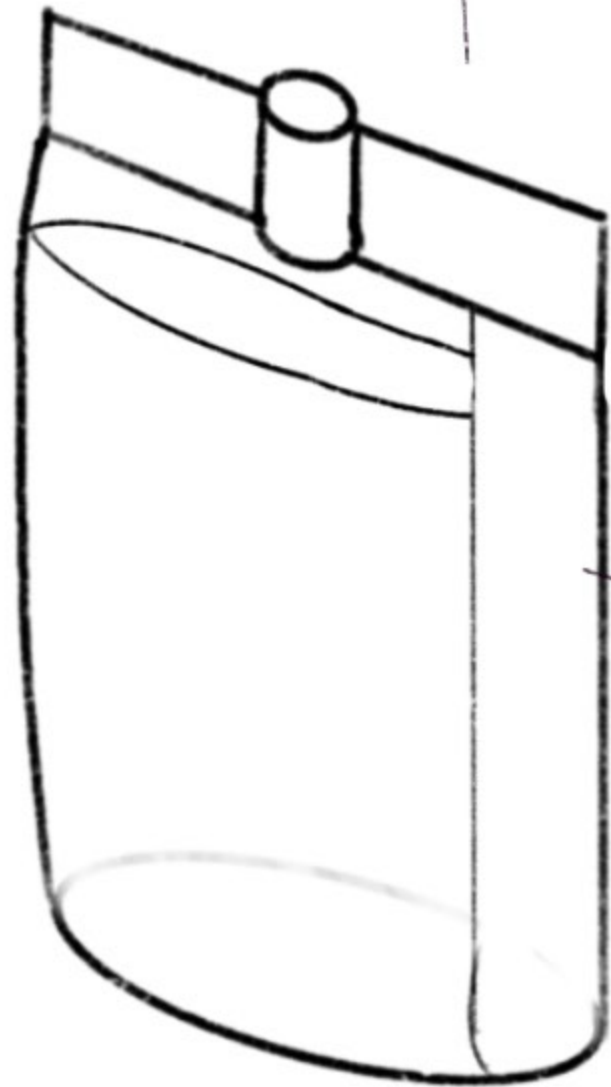
müller
SPARK 

MÜLLER BRANDING IDEAS



PINCH
TO BURST
POUCH

COULD EXPLODE?

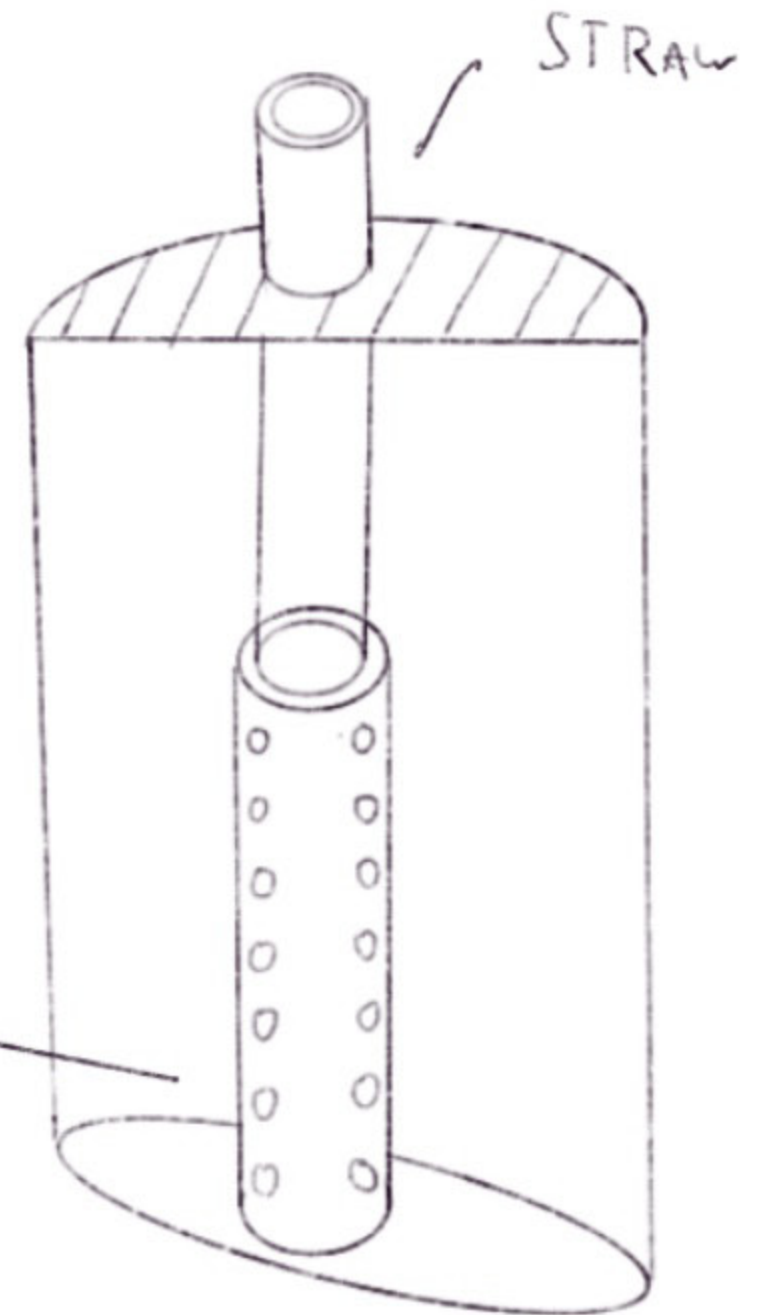


FLAVOUR
SECTION

CLEAR
POUCH

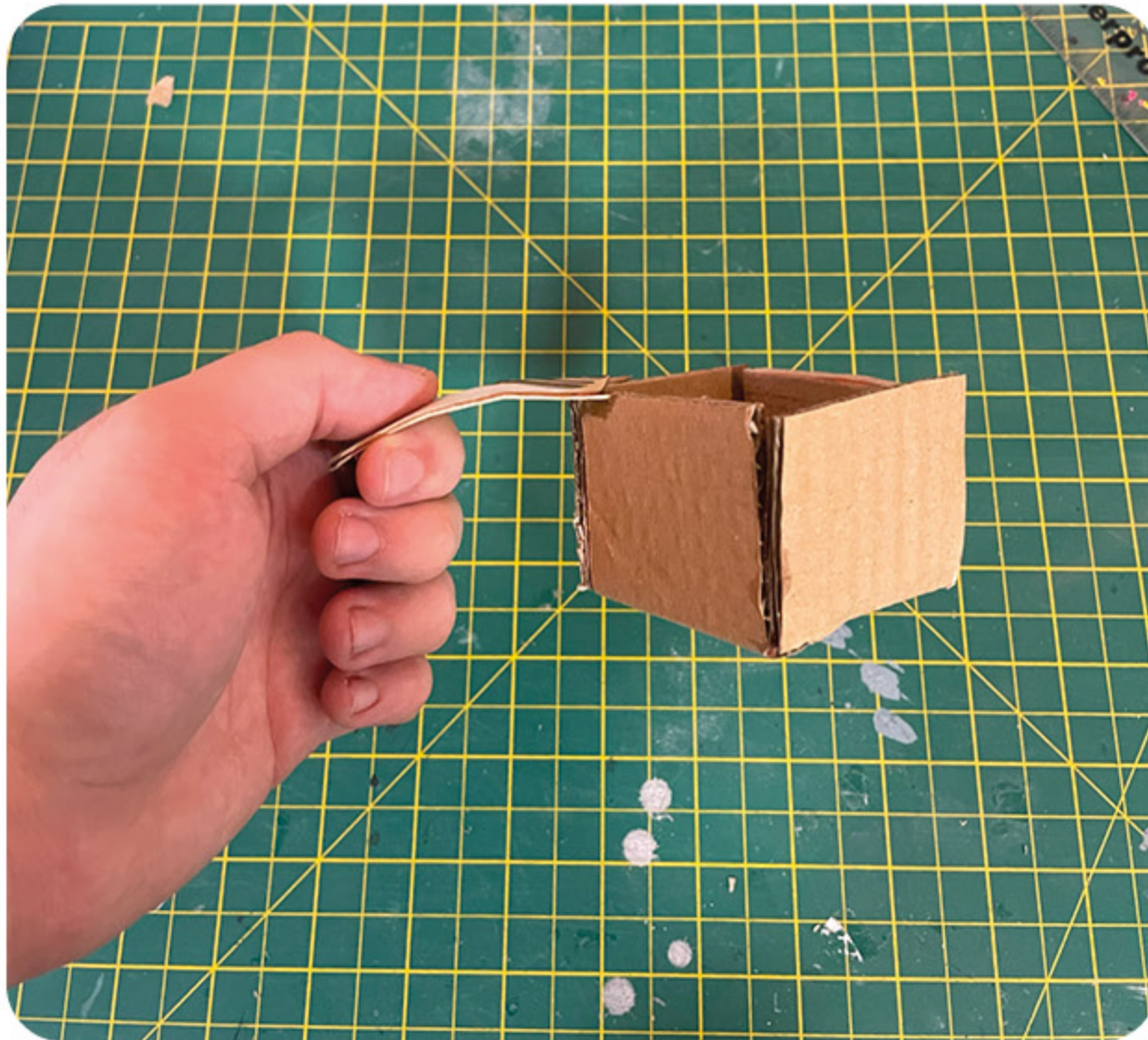
DOES THIS
SOLVE
ANYTHING?

CHAMBER
CONTAINS
FLAVOUR



STRAW

CHAMBER
POUCH

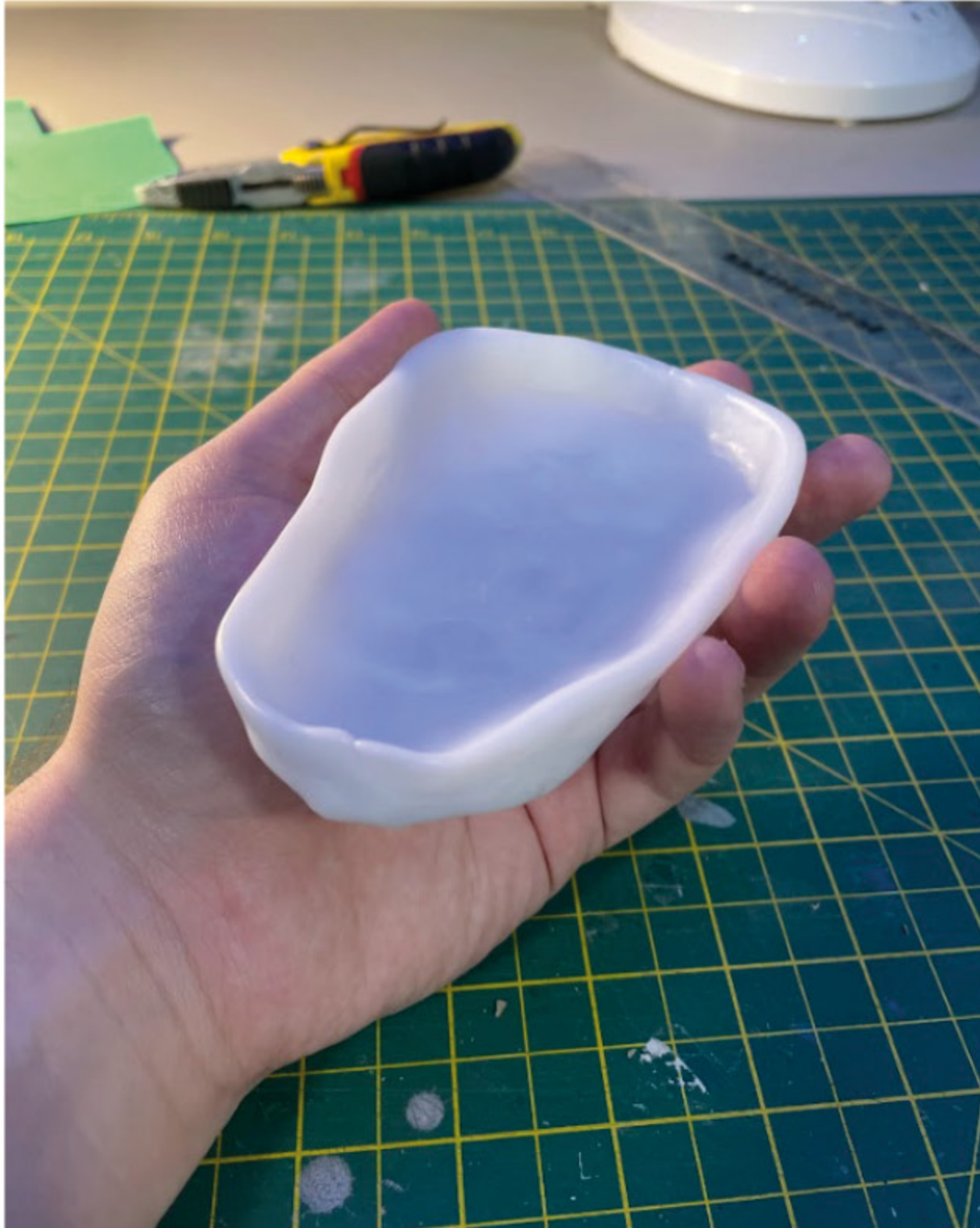


this card model was created based off of one of the earlier sketches of a yogurt pot with a corner handle. it consisted of a card cube with 120g of weight inside, and a 2mm thick card handle attached at the corner using superglue.

almost immediately after picking up the pot, the handle began to sag and eventually tore off the pot itself. this showed two things, firstly that most adhesives wouldnt be strong enough for a handle, meaning that any future attempts would have to be integrated into the structure of the body itself.

secondly, is that the handle needs to be closer to the center of gravity. unless the handle was made of a thicker material it would have to be closer to the actual pot itself, either vertically on the side or as more of an extended lip.

MODEL 1 - CARD HANDLE



this model was based off the initial oyster concept, constructed using polymorph.

although harder to get a perfect shape out of, polymorph was an easier material to make such a complex shape out of in order to test its effectiveness.

when using the product, it was somewhat awkward to use, the final product would likely need to develop the area where the user sips the yogurt. in addition to evaluating how the product is held.

the size was also a concern, it fit well into my palm, but its overall volume was extremely small (around 75g of yogurt). so the size of the product would have to increase as well.

MODEL 2 - POLYMORPH OYSTER



oyster design :

simply lift the foil cover and eat the yogurt one handed without the need for utensils



handle / utensil design :

conveniently carry the container without the need for a surface, with an integrated utensil for consuming the yogurt on the go.

clear polyethylene



rPET (white)

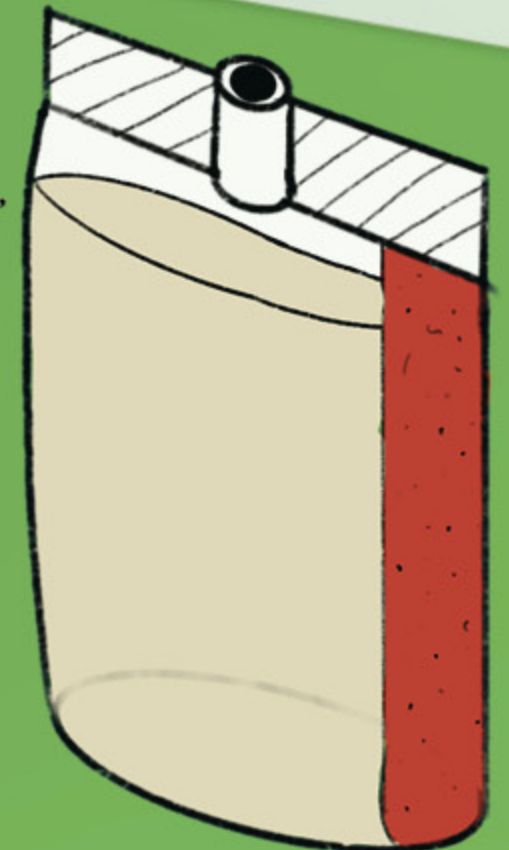


aluminium foil



pouch design :

separated into 2 sections, burst the flavour side by squeezing it, releasing it into the yogurt.



CONCEPT FEEDBACK



Oyster Design
Will it
Balance when
put down?
→ MAYBE IT SHOULD
NEVER BE PUT DOWN?
IF OTG

Will it explode
in your Bag

HOW DO THEY
KNOW IT WON'T
MAKE A MESS
WHILE IN BUY
AREA?

the oyster concept was the most successful idea to come from the concept review.

although the product needed to be altered to address uncomfortability with use and sturdiness, it was the design which people saw the most potential in.

DOES IT
NEED A
HANDLE?

What would the
user satisfaction
be of a spoon
that is that shape?

The handle looks
quite small +
narrow, how can
it be more
ergonomic?

OR IF IT DOES
PERHAPS MORE
INTEGRATION



HOW EASY
COULD SOMEONE
USE THE RECTANGULAR
UTENSIL?

The spoon
will be
exposed to
dirt and other
people touching
it in transport
and shelf

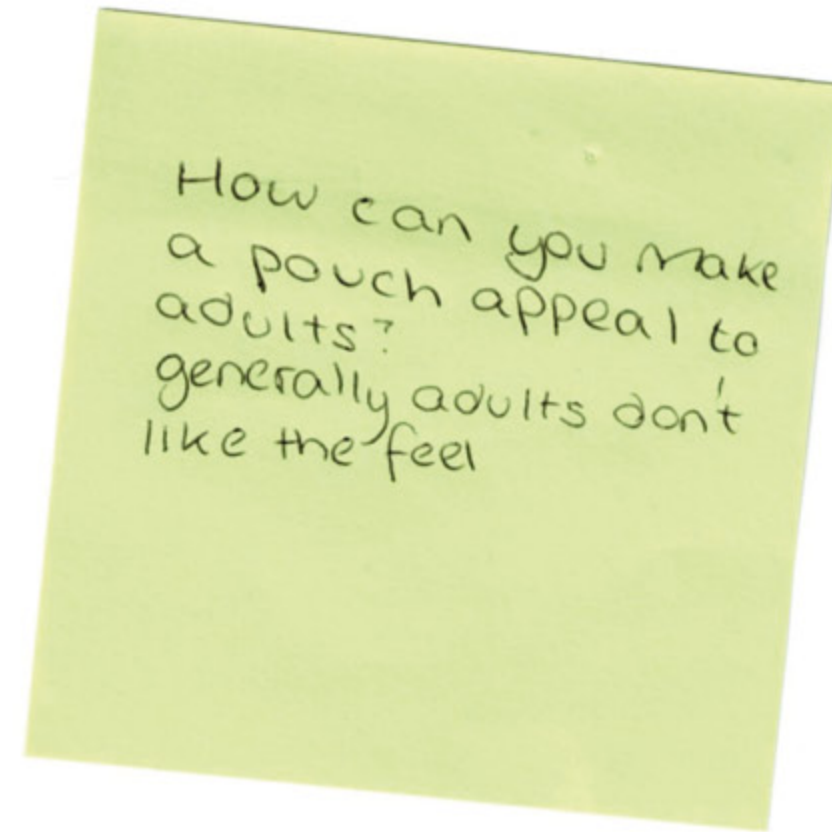
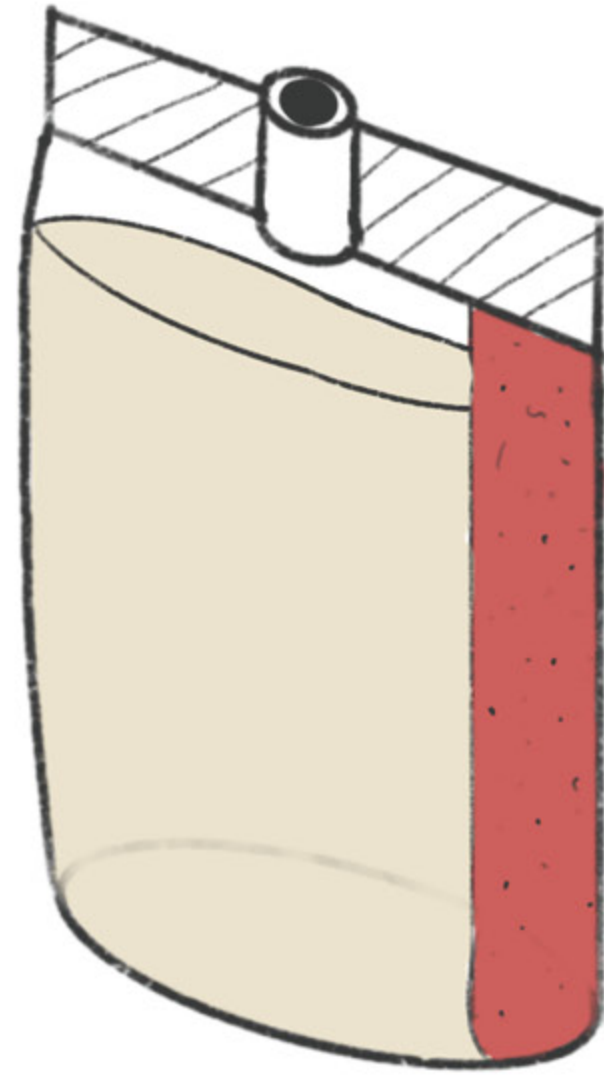
the idea with the most reception was the handle design, as my personal favourite going into it i was aware it needed to be improved in a few areas however it was more flawed than i had imagined.

it became clear that the handle ultimately wasn't that useful and wouldn't have provided much of a benefit to the user.

the suitability of the handle itself and the fact that the spoon inside would be vulnerable to germs made the idea unusable.



CONCEPT FEEDBACK



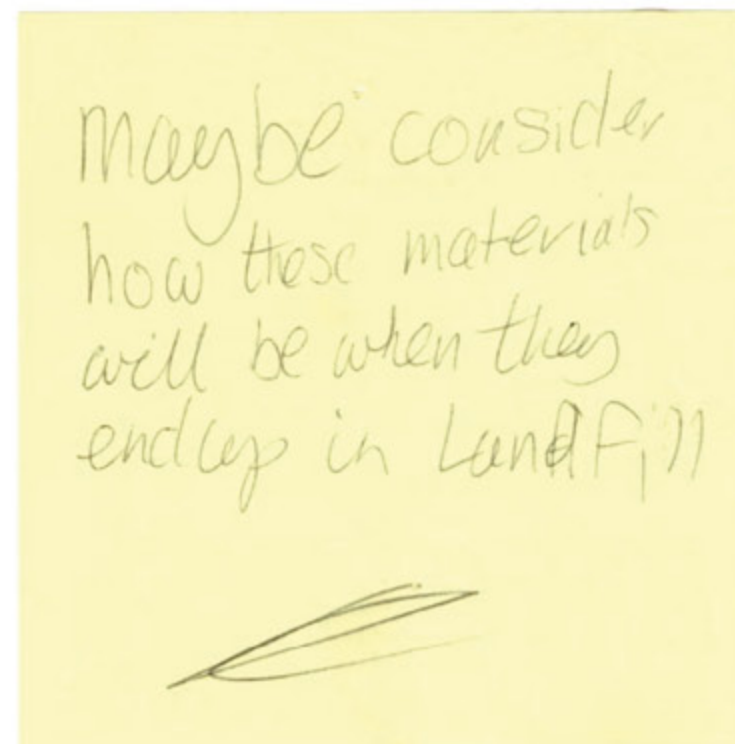
the pouch design recieved only one piece of feedback, after it was added last minute to gather any additional info on an idea i had considered dead.

i wasn't able to come up with any viable solutions to the inherent problem that pouches don't have appeal to adults.

CONCEPT FEEDBACK

this piece of feedback was a clear reminder of something i knew had to change with the product. the brief stated that the product had to be done in a "sustainable" way.

the choice of materials including polymers and metal foils wouldn't fit this category and a new solution to the packaging had to be found.



MATERIAL RESEARCH



initial material - polypropylene

after the concept review, it became clear that polypropylene as the main material for the product was no longer sufficient.

it can take up to 30 years for polypropylene to degrade in landfills, possibly leaching harmful substances into the ground such as lead or cadmium which are used in the manufacturing process.

a more sustainable material, which can easily be recycled or biodegraded is needed to fit the brief.

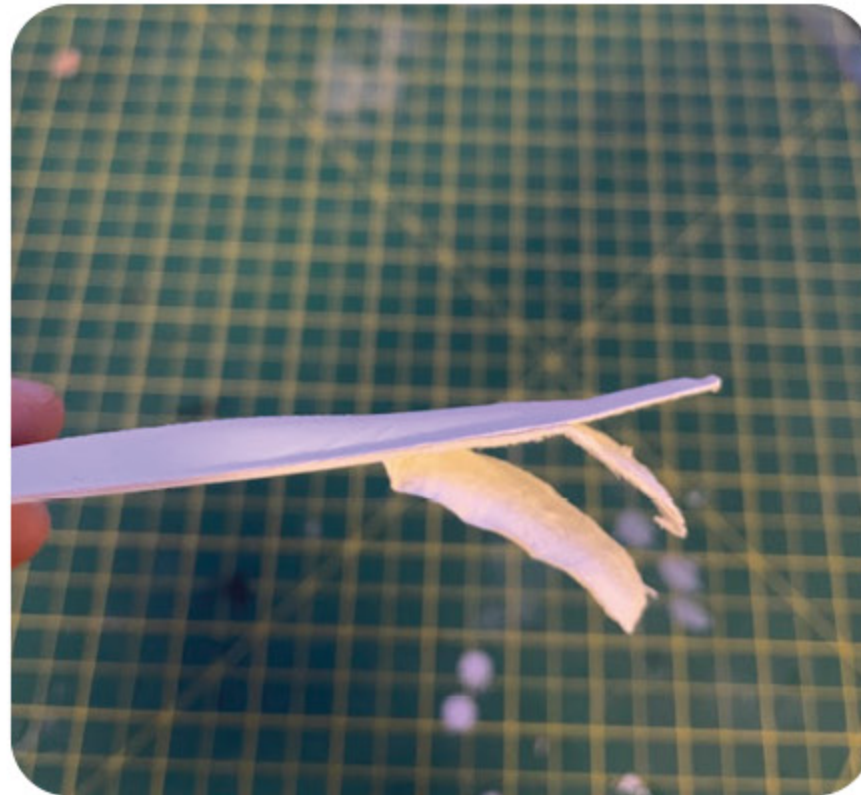


when visiting mcdonalds, i came across paperboard being used as spoons for their mcflurrys.

this instantly clicked to become the new primary material for the product, as a monomaterial with sustainable qualities, as well as the ability to be manufactured using recycled material - it was perfect for both the brief and the brand.

it was visually similar to plastic, as well as having a smooth feel which didn't affect the taste of the product. however more research was needed to test its capabilities and how it would hold up in use a yogurt container.

PAPERBOARD EVALUATION



TEST 1

this test was to evaluate how the material was constructed, its constructed using various layers of paper material formed together under high pressure.

an idea gained from this was that the product no longer needed foil, instead the manipulated material at the top could be made from the same material.

this solution still allows for printing, whilst letting the user recycle the product without having to completely remove the lid.

TEST 2

this test was to test how the material would react to a porous liquid over time. i left a paperboard spoon in water for 4 days and recorded the changes.

after the first day, the material had no large changes, the surface of the material which was submerged looked slightly wrinkled however running my finger over it showed no change in the actual surface.

after the 4th day, the surface was slightly more wrinkled, and the exposed edge of the product was becoming rougher. when trying to pull apart the layers of the board at the submerged edges, it was still difficult to tear.

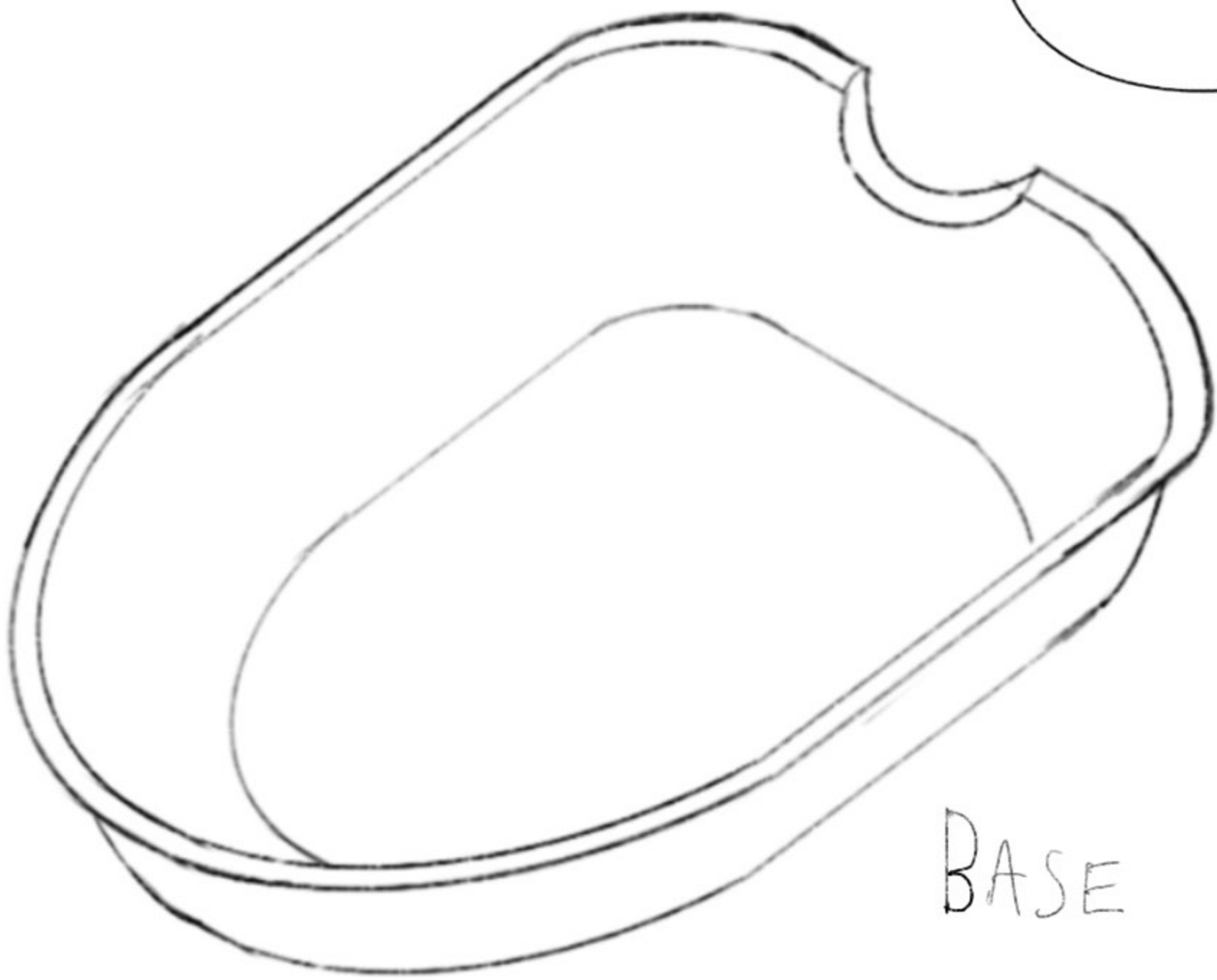
overall this test was a success, and use in a less porous material like yogurt should prove succesful for long term storage.



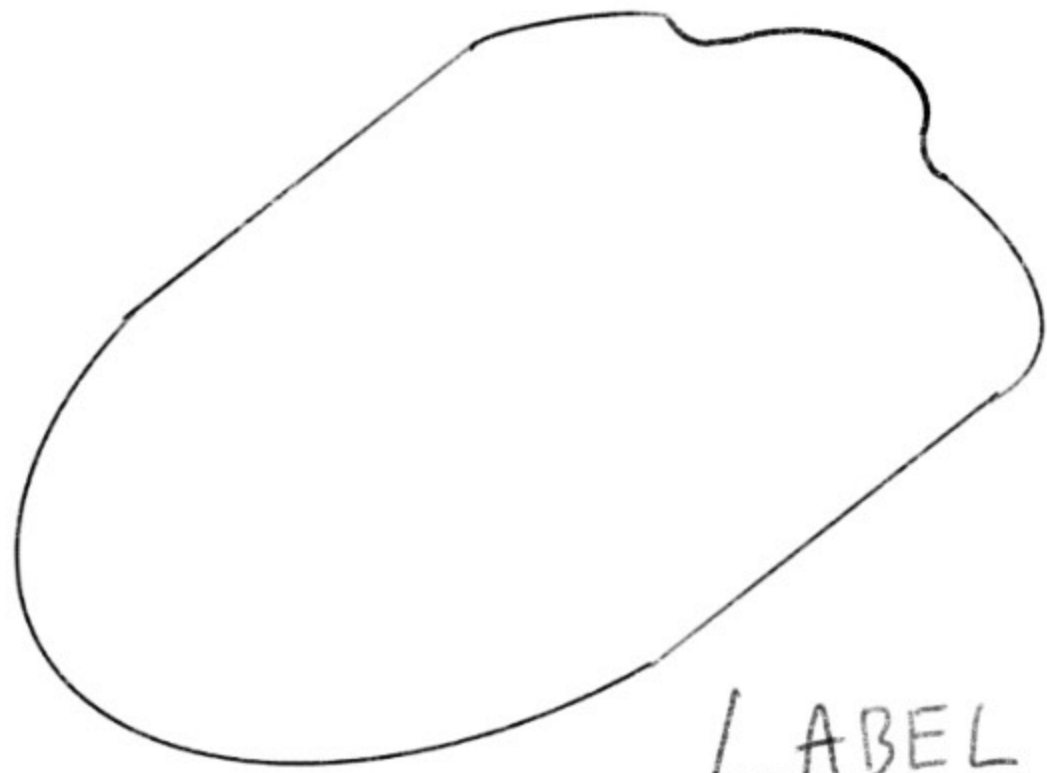
DAY 1

DAY 4

DEVELOPMENT SKETCHES



BASE



LABEL

this cad model was used for the mould used to create my
'final' product.

measuring at around 130mm x 150mm x 25mm, it is large enough
to contain around 100g of yogurt.



FINAL IDEA CAD

FINAL MODEL

after 3d printing the cad imprint of the final model, it was attached to a piece of plywood to be vacuum formed with 1mm HDPE to replicate the appearance of paperboard.



FINAL IDEA FAILURE



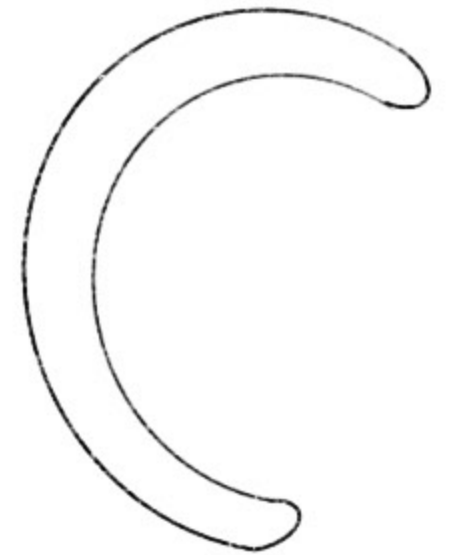
once the main section of the final model had been completed and i began to prepare it for labelling, i realised in hand how unergonomic the design still was.

not only was it difficult to drink out of, but even holding it was difficult due to its shallow depth and lack of any discernible areas to grip it.

after this it became clear that more development was needed in the shape, and some exploration of anthropometrics, as well as comfort when holding something was required.

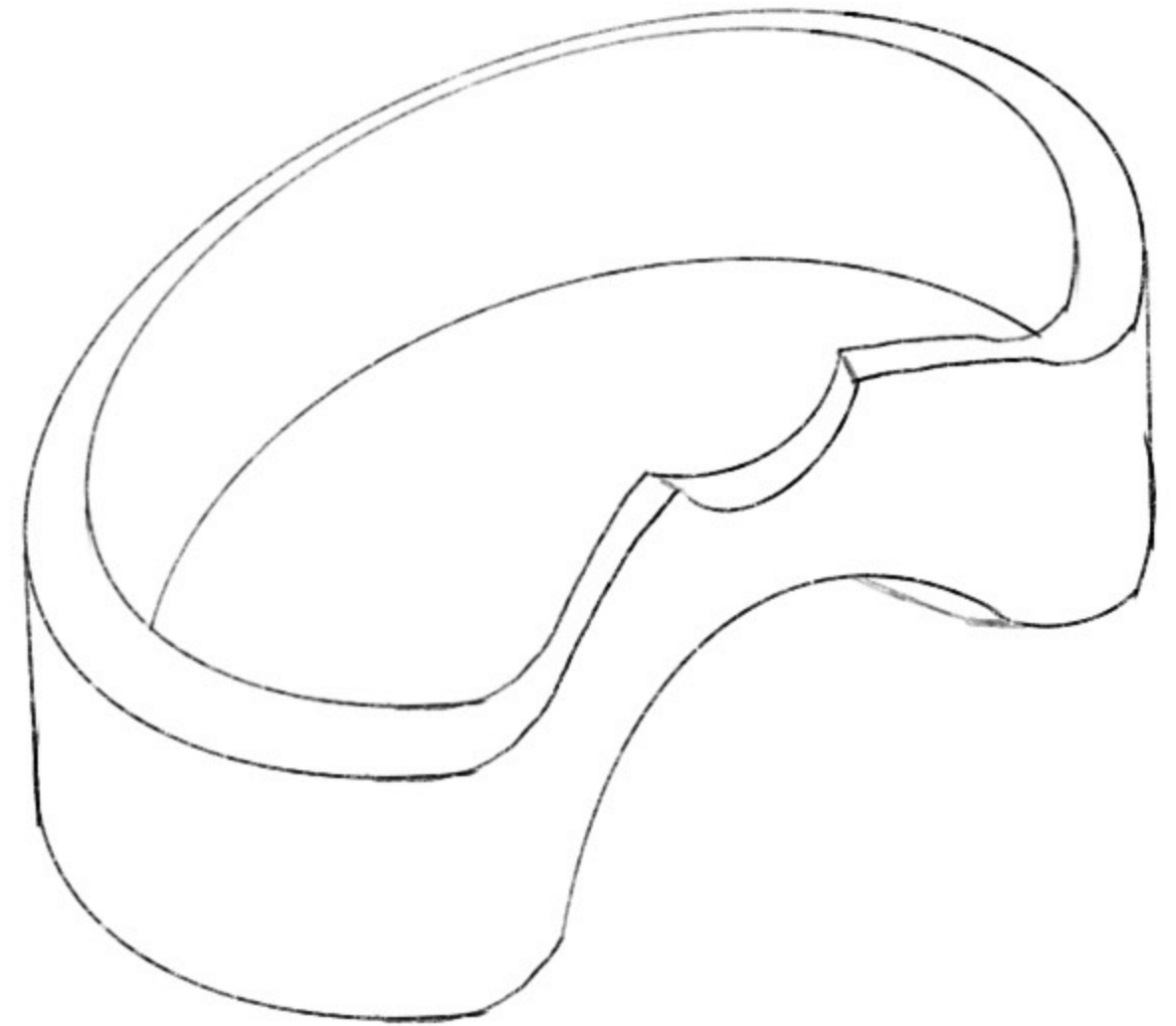
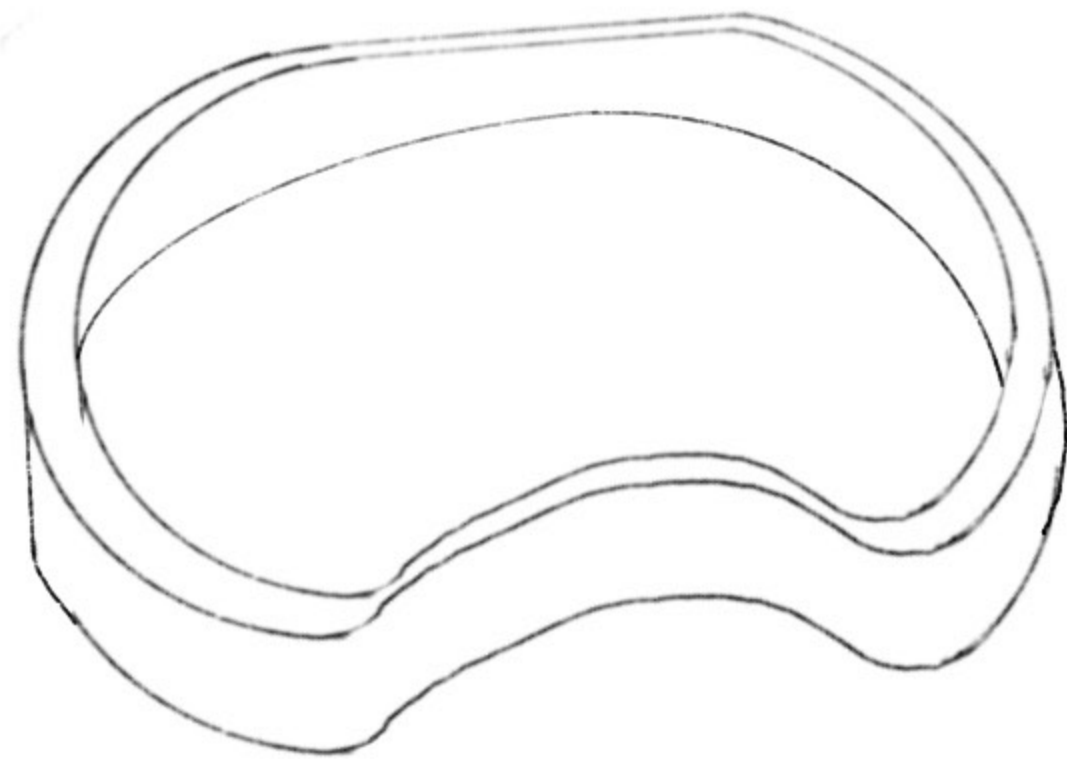
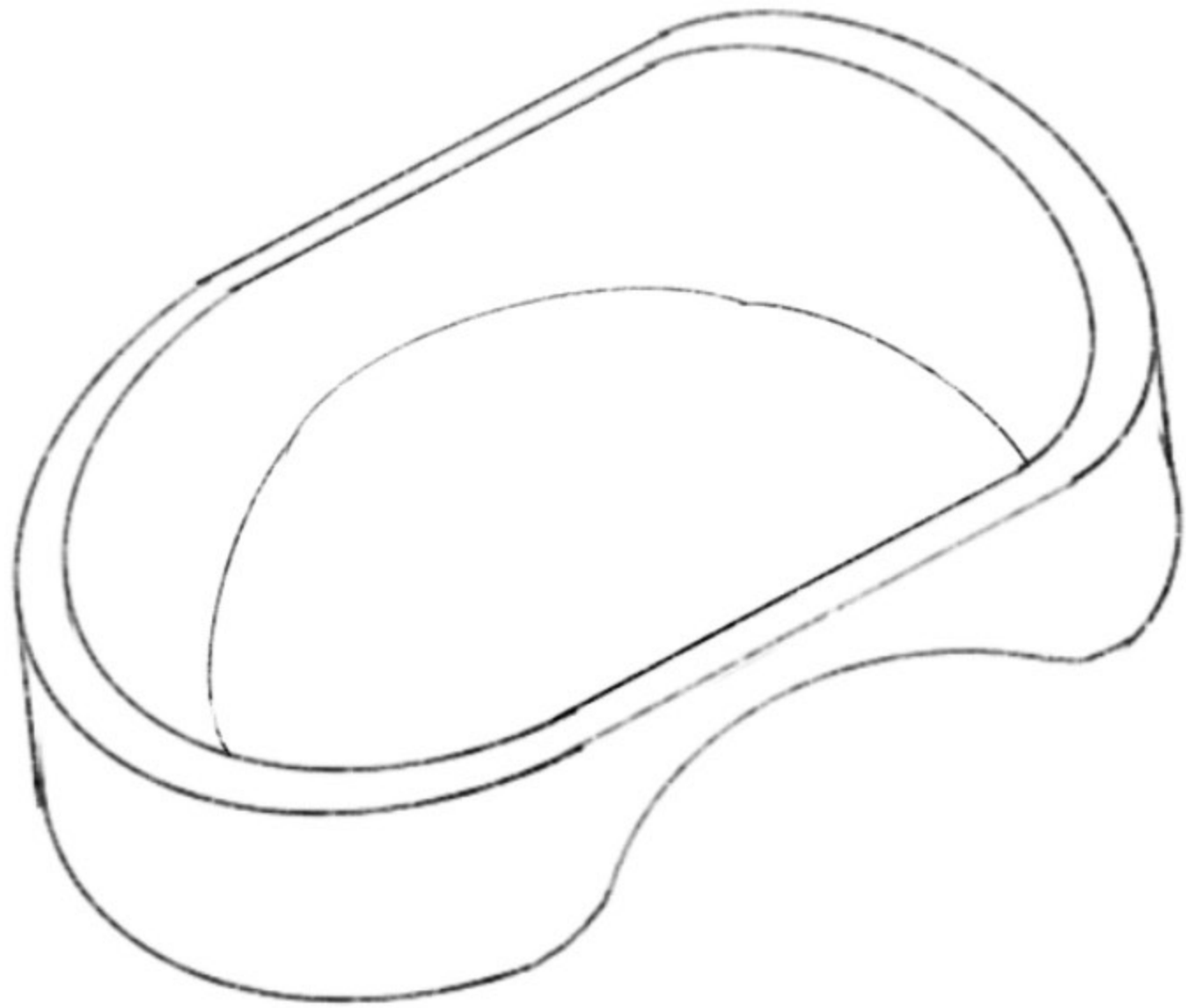


PALM
SHAPE



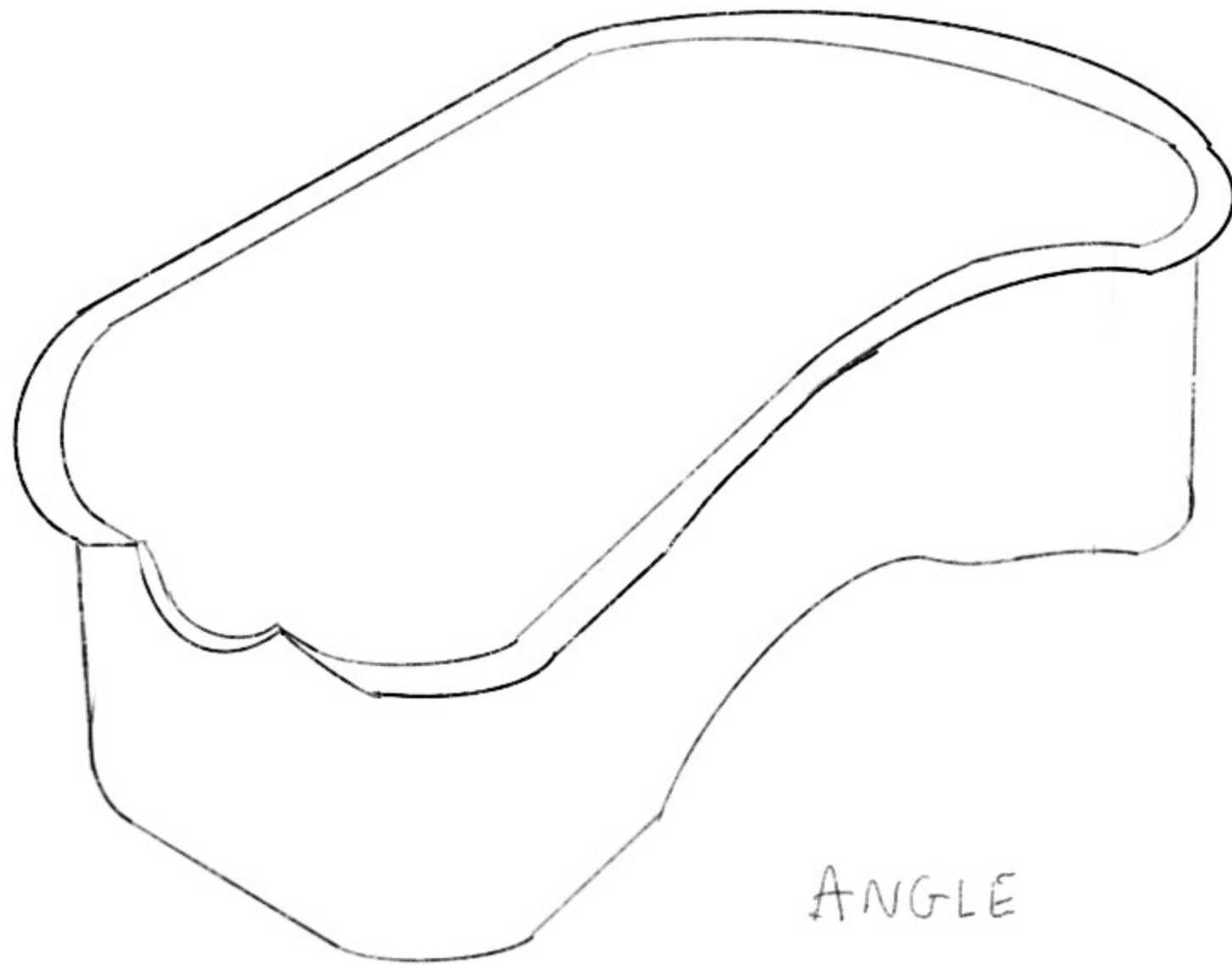
GRIP SHAPE

SHAPE
EXPLORATION

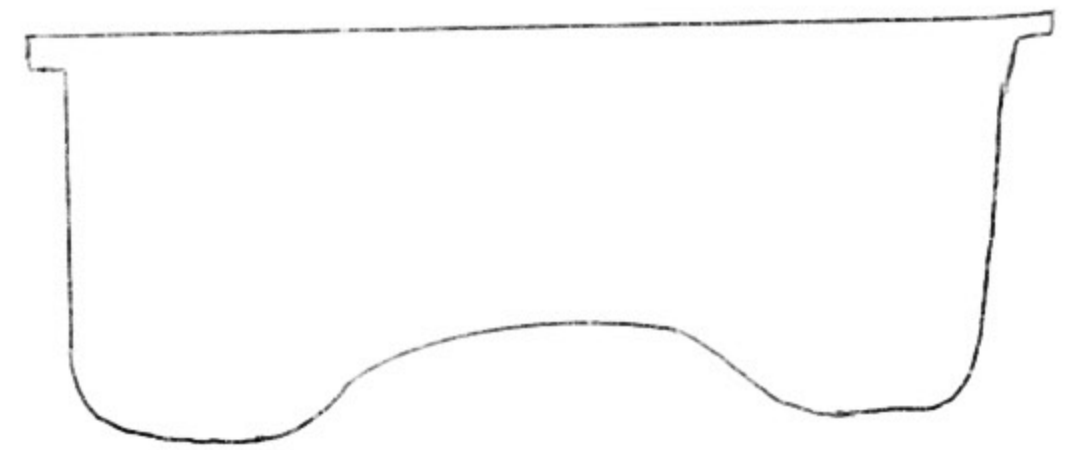
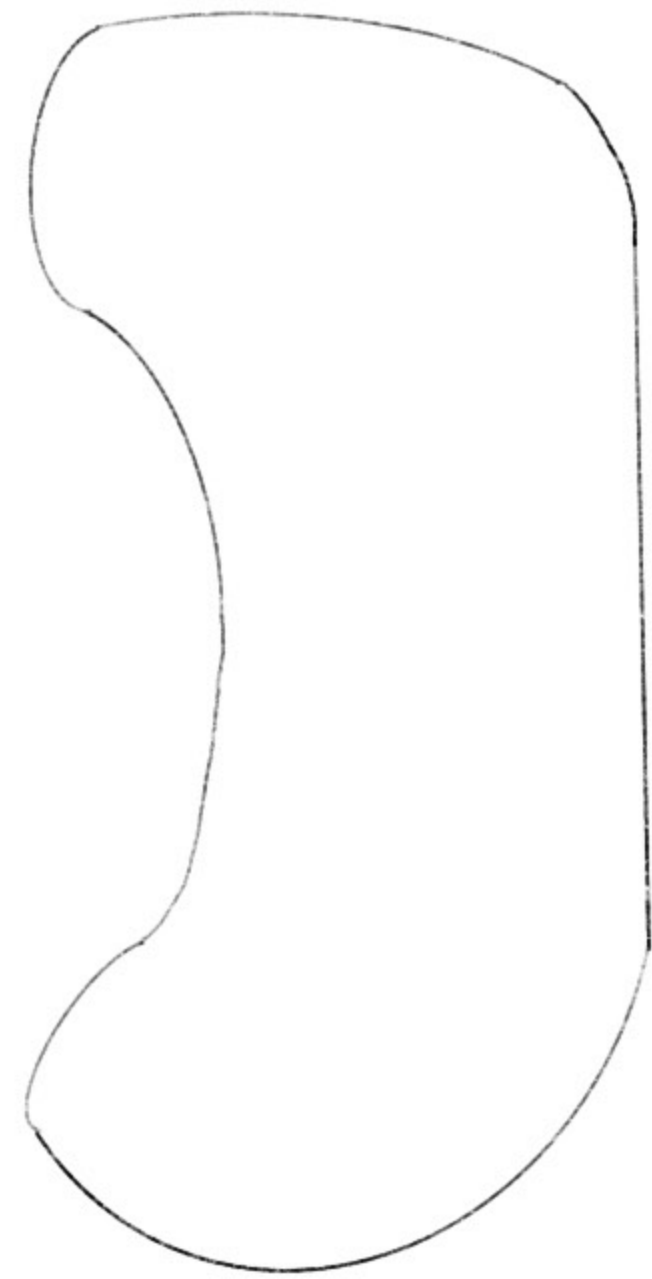


FINAL
SHAPE

TOP



ANGLE



SIDE



once the final design had been completed, i needed to choose a direction for the branding. i chose to focus my attention on light, as it was the most basic in form and appealed to a consumerbase of health conscious people, fitting the 'on the go' theming more.

BRANDING



with the final branding design, i wanted to stay true to the muller light branding as it currently stands. this meant that the sky blue gradient was the primary colour for the top segment, contrasted with the creamy white of the yogurt it slowly blends into.

it was important that the primary image of yogurt rising from the base was in clear view and could clearly indicate the flavour from multiple angles. i also wanted to give it an indication to how it worked, with the arrow pointing towards the cutout for drinking at the top, as well as the large 'go' logo clearly under the main branding to indicate that its a new variation of the product line.

FINAL BRANDING



this is the mould used for the final version of the product. after learning from the previous version, it used a thicker outer layer to prevent honeycombing from the vacuum former.

its shape has been altered to be more ergonomic, with multiple grip points on the side and underneath. the measurements of which were based on anthropometric data about hand size averages.





to use the product, the tab on the top can simply be pushed in to create a hole, allowing the user to drink the yogurt with one hand.

this hole can be used to tear the entire lid off the product, in order to use a utensil for a more hands on experience.

