

APPENDIX 6.0

PARENT HANDLING, PREPARATION AND STORAGE OF POWDERED INFANT FORMULA FEEDS: OBSERVATION AND MICROBIOLOGICAL ANALYSIS

Observational Checklist

Recruitment Questionnaire

Recruitment leaflet / poster

Recruitment leaflet / poster (continued)

Recruitment Advert

Mauds Baby Show

Telephone Protocol

Confirmation letter sent to all participant

Participant Information Sheet

Participant Information Sheet (page 2)

Instructions sent to parents before participating – for reference purposes

PROTOCOL: Participant PIF and food preparation session in UWIC.

Informed Consent Form

Powdered infant formula instructions provided in model kitchen

Powdered infant formula instructions provided in model kitchen (continued)

Chicken Salad Recipe

Microbiological Sampling of Prepared Infant Feeding Bottles, Reconstituted Feeds and

Environmental Kitchen Surfaces, Post-Observation Session

Validation of cleaning protocol

Observational Checklist

Participant Number	Brags infant: <input type="checkbox"/> Yes <input type="checkbox"/> No	Start time	End time
FSA Powdered Infant Formula Study: Parent Observational Checklist			
Observed behaviour	Response	Recorded Response (delete as appropriate)	
Order of actions (1st, 2nd, 3rd, 4th, 5th, 6th, 7th)			
- Cleans (wash and rinse) bottles and components	state number.....		
- Sterilises / disinfects bottles and components	state number.....		
- Removes bottles / components from steriliser / solution	state number.....		
- Reconstitution of powdered formula	state number.....		
- Handles / prepares raw chicken	state number.....		
- Handles / prepares cooked ham	state number.....		
- Handles / prepares salad vegetables	state number.....		
Handwashing / drying before cleaning / sterilising feeding bottles and components			
Attempts to clean hands	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No	
Touches tap before washing	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No	
Touches tap after washing	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No	
Washing: Use of hot water	<input type="checkbox"/>	Adequate	
Use of soap / detergent	<input type="checkbox"/>	Inadequate	
Rinsed with water	<input type="checkbox"/>	No attempt	
No washing	<input type="checkbox"/>		
Drying: Use of clean hand towel	<input type="checkbox"/>	Adequate	Inadequate
Use of paper towel	<input type="checkbox"/>	Adequate	No attempt
Use of T towel	<input type="checkbox"/>	Inadequate	
Use of unclean hand towel	<input type="checkbox"/>	No attempt	
Wipes hands on clothes	<input type="checkbox"/>		
No drying	<input type="checkbox"/>		
Wipes hands on cloth	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No	
Handwashing / drying after handling raw chicken / raw chicken packaging			
Attempts to clean hands	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No	
Washes hands immediately after touching RC/ RCP	<input type="checkbox"/>	All, Some, None	
Touches tap before washing	<input type="checkbox"/>	All, Some, None	
Touches tap after washing	<input type="checkbox"/>	All, Some, None	
Washing: Use of hot water	<input type="checkbox"/>	Adequate	
Use of soap / detergent	<input type="checkbox"/>	Inadequate	
Rinsed with water	<input type="checkbox"/>	No attempt	
No washing	<input type="checkbox"/>		
Drying: Use of clean hand towel	<input type="checkbox"/>	Adequate	Inadequate
Use of paper towel	<input type="checkbox"/>	Adequate	No attempt
Use of T towel	<input type="checkbox"/>	Inadequate	
Use of unclean hand towel	<input type="checkbox"/>	No attempt	
Wipes hands on clothes	<input type="checkbox"/>		
No drying	<input type="checkbox"/>		
Wipes hands on cloth	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No	
No. of items / surfaces touched with unwashed hands after RC/RCP	No.		
Retouches potentially contaminated surface after attempted HW	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No	

Observed behaviour	Response	Recorded Response (delete as appropriate)
Cleaning of 'used' feeding bottles and components before disinfection / sterilisation		
- Use of bowl of fresh, hot water	<input type="checkbox"/>	All, Some, None
- Use of detergent	<input type="checkbox"/>	All, Some, None
- Use of bottle brush	<input type="checkbox"/>	All, Some, None
- Use of general washing up brush	<input type="checkbox"/>	All, Some, None
- Bottles and components are washed immersed in hot soapy water	<input type="checkbox"/>	All, Some, None
- Scrub inside teat	<input type="checkbox"/>	All, Some, None
- Scrub outside teat	<input type="checkbox"/>	All, Some, None
- Scrub inside bottle	<input type="checkbox"/>	All, Some, None
- Scrub outside bottle	<input type="checkbox"/>	All, Some, None
- Scrub inside screwcap	<input type="checkbox"/>	All, Some, None
- Scrub outside screwcap	<input type="checkbox"/>	All, Some, None
- Scrub outer rim of bottle	<input type="checkbox"/>	All, Some, None
- Rinsing of bottle using fresh running water	<input type="checkbox"/>	All, Some, None
- Rinsing of teat using fresh running water	<input type="checkbox"/>	All, Some, None
- Rinsing of screwcap using fresh running water	<input type="checkbox"/>	All, Some, None
- After rinsing, bottles and components placed directly into steriliser unit	<input type="checkbox"/>	All, Some, None
onto paper towel	<input type="checkbox"/>	All, Some, None
onto unclean surface	<input type="checkbox"/>	All, Some, None
onto cleaned* surface	<input type="checkbox"/>	All, Some, None
onto washing up rack	<input type="checkbox"/>	All, Some, None
other (please state)	<input type="checkbox"/>	All, Some, None
- Remaining feed visibly removed	<input type="checkbox"/>	All, Some, None
Preparation of ALL raw chicken before pig feeds	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Preparation of pig on same surface as raw chicken	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Attempts to infant during food preparation	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Attempts to infant during bottle preparation	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Attempts to infant during pig preparation	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Surface cleaning (when and how)		
- Method:	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Cleans work surface thoroughly on which to prepare the feed: Wipes surface with hot water and detergent, rinse, spray with sanitiser / antibacterial spray and wipe with paper towel		
Use of potentially contaminated cloth	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Use of cloth used for washing up	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Use of paper towel	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Other (please state)	<input type="checkbox"/>	
- When: Before cleaning of bottles and components	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
After cleaning of bottles / components and before sterilisation	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
After sterilisation and before reconstitution of powdered formula	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
After preparation of pig	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No

Participant Number	Response	Recorded Response (delete as appropriate)
Sterilising		
- Sterilisation / disinfection of feeding bottles and components	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Cold Water Disinfection		
- Reads instructions before preparation of disinfection fluid	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Measures out water	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Use of Milton tablets	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Use of Milton liquid	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Use of Supermarket brand (tesco) tablets	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Use of Supermarket brand (tesco) liquid	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Placement of the bottles and teats so no air bubbles are present	All, Some, None	All, Some, None
- Record number of bottle placed into sterilising fluid	..... (no. of bottles)	Record number (minutes)
- Length of time disinfection treatment in the fluid occurs	Immerse Remove	Record time (minutes)
- Adequate disinfection time (Milton tablets: 15minutes = 1 tablet and 3l water; Milton liquid: 15minutes = 15ml% capful in 2.5l water; Tesco tablet: 30minutes = 1tablet in 4pt/2.5l water for x; Tesco liquid: 30minutes = 15ml% capful in 2l water)	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Rinses bottles / components after disinfection	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Phillips AVENT Express Microwave Steam Steriliser		
- Reads instructions	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Same brand / model as used in home	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Measure and add 200ml of water to the unit before use	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Maximum 2 bottles per cycle	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Load items according to manufacturers instructions: inverted bottles into crescent shaped holes (supported at an angle) and arrange screwcaps, teats and dome lids the correct way up around the edge of the rack - ensuring items are positioned to allow effective circulation of the steam	<input type="checkbox"/>	All, Some, None
- Change microwave wattage to 700W	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Length of sterilisation using microwave unit	Time start microwaving Time end microwaving	Length of time
- Adequate sterilisation time (minimum 8minutes)	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Time bottles and components are removed from the unit	.....	/
- Allow 2 minutes after microwaving for cooling	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Phillips AVENT Electric Steam Steriliser		
- Reads instructions	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Same brand / model as used in home	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Employs water from unit before use	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Measure and add 50ml / 30oz water to unit before use	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Load items according to manufacturers instructions: ensure screwcaps are threaded the correct way up on the central stem, teats are placed the correct way up on the lower basket, dome lids in the upper basket and bottles are inverted. Steam must be able to circulate effectively around all surfaces and any water must be able to drain off easily.	<input type="checkbox"/>	All, Some, None
- Length of electric steam sterilisation cycle	Time turn on Time light goes off	Length of time
- Adequate sterilisation time (minimum 8minutes)	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Time bottles and components are removed from steriliser	.....	/
- Allow 3 minutes after sterilisation cycle for cooling	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Manufacturers sterilisation instructions followed	All, partly, not at all	All, partly, not at all

Observed behaviour	Response	Recorded Response (delete as appropriate)
Hand washing / drying		
A) immediately before removal of bottles / components from steriliser		
Attempts to clean hands	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Touches tap before washing	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No; NA
Touches tap after washing	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No; NA
Washing: Use of hot water	<input type="checkbox"/>	W-Adequate
Use of soap / detergent	<input type="checkbox"/>	W-Inadequate
Rinsed with water	<input type="checkbox"/>	W-No attempt
No washing	<input type="checkbox"/>	W-No attempt
Drying: Use of clean hand towel	<input type="checkbox"/>	D-Adequate
Use of paper towel	<input type="checkbox"/>	D-Inadequate
Use of T towel	<input type="checkbox"/>	D-No attempt
Use of unclean hand towel	<input type="checkbox"/>	D-No attempt
Wipes hands on clothes	<input type="checkbox"/>	Cum-Adequate
No drying	<input type="checkbox"/>	Cum-Inadequate
Wipes hands on cloth	<input type="checkbox"/>	Cum-No attempt
	<input type="checkbox"/>	Cum-No attempt
	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
Preparation of feeding bottles		
- Removal of bottles and components immediately before feed preparation (pig and water) of feed	<input type="checkbox"/>	All, Some, None
- If (some) bottles are not used immediately fully assemble before use. (excluding bottle 1 left empty for 'cleaning efficacy micro)	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Use of sterilised tongs to pull teat through screwcap	<input type="checkbox"/>	All, Some, None
- Places upturned bottles onto work surface (uncleaned*)	<input type="checkbox"/>	All, Some, None
- Bottle, teat and other components are placed onto work surface (uncleaned)	<input type="checkbox"/>	All, Some, None
- Bottle, teat and other components are placed onto paper towel on work surface	<input type="checkbox"/>	All, Some, None
- Handles teat (except for outer rim)	<input type="checkbox"/>	All, Some, None
Reconstituted feed for immediate feeding (w/m)		
- Reads instructions on SMA tin	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Use of fresh tap water	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Prescures oil feed with boiled water	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No
- Smooths out measured powder	<input type="checkbox"/>	All, Some, None
- Uses attention to smooth out powdered formula	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No or NA
- Utensil sterilised before use	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No or NA
- Use of other item for smoothing out measured powder	(state) .....	..... or NA
Record time start water boiling	Boiling time average = 3minutes	/
Cools boiled water in kettle	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No or NA
Record time boiled water poured into bottle	/	/
Cools boiled water in bottle	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes or * No or NA
Record time mix boiled water with pig	Time mix pig with water minus averaged boiling time*	*Time or NA or >20mins in advance

Observational checklist (continued)

Observed behaviour	Response	Recorded Response (delete as appropriate)
- Cools water BEFORE reconstitution with pif	<input type="checkbox"/>	✓ Yes or * No
- Cools boiled water in bottle or kettle	Bottle <input type="checkbox"/> Kettle <input type="checkbox"/>	✓ Bottle / Kettle or * No or NA
At room temperature	<input type="checkbox"/> If ✓ state 'reported?' time.....	✓ Yes or * No or NA
Under running cold tap	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
In jug / bowl / washing up bowl of cold water (note as applicable) (note if change water)	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
- Cools AFTER reconstitution with pif	<input type="checkbox"/>	✓ Yes or * No
At room temperature	<input type="checkbox"/> If ✓ state 'reported?' time.....	✓ Yes or * No or NA
Under running cold tap	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
In jug / bowl / washing up bowl of cold water (note as applicable) (note if change water)	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
- Checks temperature of feed by shaking a few drops onto the inside of the wrist	<input type="checkbox"/>	✓ Yes or * No
Preparation of 3 bottles for feeding more than 2 hours time		
- Feeds reconstituted (n=3)	<input type="checkbox"/>	✓ Yes or * No
- Use of fresh tap water	<input type="checkbox"/>	✓ Yes or * No
- Prepares pif feed with boiled water	<input type="checkbox"/>	✓ Yes or * No
- Smooths out measured powder	All <input type="checkbox"/> Some <input type="checkbox"/> None <input type="checkbox"/>	All, Some, None
- Uses utensil to smooth out powdered formula	<input type="checkbox"/>	✓ Yes or * No or NA
- Utensil sterilised before use	<input type="checkbox"/>	✓ Yes or * No or NA
- Use of other items for smoothing out measured powder	(state).....	..... or NA
- Time between boiling of water and pif reconstitution	See X	Time.....
- Left at room temperature	<input type="checkbox"/>	✓ Yes or * No or NA
- Immediate refrigeration	<input type="checkbox"/>	✓ Yes or * No or NA
- State location in fridge	.....	State location or NA
- 'reported' refrigeration location	<input type="checkbox"/>	✓ Yes or * No or NA
- Bottles have boiled water in ready for addition of pif (n=3)	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of teat	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of outer rim of bottle	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of inner part of screwcap	<input type="checkbox"/>	✓ Yes or * No
- Use of fresh tap water	<input type="checkbox"/>	✓ Yes or * No
- Prepares pif feed with boiled water	<input type="checkbox"/>	✓ Yes or * No
- Bottles left empty (n=3)	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of teat	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of outer rim of bottle	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of inner part of screwcap	<input type="checkbox"/>	✓ Yes or * No

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Observed behaviour	Response	Recorded Response (delete as appropriate)
Infant feeding away from the home		
- Feed is reconstituted	<input type="checkbox"/>	✓ Yes or * No
- Use of utensil for smoothing out measured powder	<input type="checkbox"/>	✓ Yes or * No or NA
- Utensil sterilised before use	<input type="checkbox"/>	✓ Yes or * No or NA
- Storage of reconstituted feed – cool/insulated bag with cool packs	<input type="checkbox"/>	✓ Yes or * No or NA
- Storage of reconstituted feed – cool/insulated bag with NO cool packs	<input type="checkbox"/>	✓ Yes or * No or NA
- Storage of reconstituted feed – carrier bag / normal bag in ambient temperature	<input type="checkbox"/>	✓ Yes or * No or NA
- Other (please state)
- Bottles have boiled water in ready for addition of pif	<input type="checkbox"/>	✓ Yes or * No
- Stores boiled water in prepared bottle at room temperature	<input type="checkbox"/>	✓ Yes or * No or NA
- Stores boiled water in prepared bottle in the fridge	<input type="checkbox"/>	✓ Yes or * No or NA
- Bottles left empty	<input type="checkbox"/>	✓ Yes or * No
- Take RTU carton	<input type="checkbox"/>	✓ Yes or * No or NA
- Take flask of boiled water and pif powder to reconstitute when out	<input type="checkbox"/>	✓ Yes or * No or NA
- Take pif powder and report obtaining boiled water when out	<input type="checkbox"/>	✓ Yes or * No or NA
- Demos taking compartment holder with measured powder	<input type="checkbox"/>	✓ Yes or * No
- Washes powder compartment carrier	<input type="checkbox"/>	✓ Yes or * No
- Sterilises powder compartment carrier	<input type="checkbox"/>	✓ Yes or * No or NA
- Method of drying powder compartment carrier
- Touches fridge handle (fully events and circle if potentially contaminated)	<input type="checkbox"/>	
- Touches handle (fully events and circle if potentially contaminated)	<input type="checkbox"/>	
- Touches hot tap handle (fully events and circle if potentially contaminated)	<input type="checkbox"/>	
- Touches cold tap handle (fully events and circle if potentially contaminated)	<input type="checkbox"/>	
- Hand towel (fully events and circle if potentially contaminated)	<input type="checkbox"/>	
- T towel (fully events and circle if potentially contaminated)	<input type="checkbox"/>	
- Surface where raw chicken prepared and cleaning	<input type="checkbox"/>	
- Surface where pif prepared and cleaning	<input type="checkbox"/>	
- Cloth.....		
- Cloth.....		

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Observed behaviour	Response	Recorded Response (delete as appropriate)
- Touches inside of RCP / RC before removing bottle / components from steriliser / solution and / or making up pif feed ¹	<input type="checkbox"/>	✓ Yes or * No
- Handles RC / RCP before removing bottle / components from steriliser / solution and / or making up pif feed ¹	<input type="checkbox"/>	✓ Yes or * No
- Adequacy of hand washing, rinsing and drying before cleaning / sterilising bottles / components ¹	Ad <input type="checkbox"/> Inad <input type="checkbox"/> No att <input type="checkbox"/>	Adequate; Inadequate; No attempt
- Adequacy of hand washing, rinsing and drying after handling RC / RCP (for all occasions) ¹	Ad <input type="checkbox"/> Inad <input type="checkbox"/> No att <input type="checkbox"/> In RCP	Adequate; Inadequate; No attempt; Bottles pif prepared before RCP/RCP handled
- Adequacy of hand washing, rinsing and drying immediately before removal of bottles / components ¹ from sterilising unit / solution	Ad <input type="checkbox"/> Inad <input type="checkbox"/> No att <input type="checkbox"/>	Adequate; Inadequate; No attempt
- Adequacy of hand washing, rinsing and drying before preparation of pif ¹	Ad <input type="checkbox"/> Inad <input type="checkbox"/> No att <input type="checkbox"/>	Adequate; Inadequate; No attempt
- Sterilisation of bottle and all components	<input type="checkbox"/>	✓ Yes or * No
Method used for sterilisation: Cold water	<input type="checkbox"/>	✓ Yes or * No
Method used for sterilisation: Electric Steamer	<input type="checkbox"/>	✓ Yes or * No
Method used for sterilisation: Microwave steamer	<input type="checkbox"/>	✓ Yes or * No
- Adequate sterilisation / disinfection process ¹	<input type="checkbox"/>	✓ Yes or * No
- Cleaning efficacy: bottle interior	Adequate; Inadequate; No attempt	
- Cleaning efficacy: bottle exterior	Adequate; Inadequate; No attempt	
- Cleaning efficacy: screwcap inside	Adequate; Inadequate; No attempt	
- Cleaning efficacy: screwcap outside	Adequate; Inadequate; No attempt	
- Cleaning efficacy: teat inside	Adequate; Inadequate; No attempt	
- Cleaning efficacy: teat outside	Adequate; Inadequate; No attempt	
- Cleaned and sterilised bottle and/or components handled with hands that have NOT been adequately washed / dried immediately beforehand	<input type="checkbox"/>	✓ Yes or * No
- Cleaned and sterilised bottle and/or components placed on an uncleaned / inadequately cleaned surface	<input type="checkbox"/>	✓ Yes or * No
- Surface on which to prepare the pif feed / bottles cleaned adequately	Ad <input type="checkbox"/> Inad <input type="checkbox"/> No att <input type="checkbox"/>	Adequate; Inadequate; No attempt
- Places sterilised bottles / components on paper towel	<input type="checkbox"/>	✓ Yes or * No
- Use of sterilised tongs to pull teat through screwcap	<input type="checkbox"/>	✓ Yes or * No
- Reassembles bottle immediately on removal from steriliser	<input type="checkbox"/>	✓ Yes or * No
- Bottles / components prepared for:		
Cleaning efficacy (empty bottle)	<input type="checkbox"/>	✓ Yes or * No
Immediate feeding (reconstituted feed)	<input type="checkbox"/>	✓ Yes or * No
Advance (>2hours) of use at home (may be reconstituted feed, empty bottle or bottle with water prepared)	<input type="checkbox"/>	✓ Yes or * No
Away from the home (may be reconstituted feed, empty bottle or bottle with water prepared)	<input type="checkbox"/>	✓ Yes or * No
Reconstituted feed	<input type="checkbox"/>	<input type="checkbox"/>
Empty bottle	<input type="checkbox"/>	<input type="checkbox"/>
Bottle with water	<input type="checkbox"/>	<input type="checkbox"/>
- Touches inside of teat (post-sterilisation / disinfection)	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of outer rim of bottle (post-sterilisation / disinfection)	<input type="checkbox"/>	✓ Yes or * No
- Touches inside of inner part of screwcap (post-sterilisation / disinfection)	<input type="checkbox"/>	✓ Yes or * No


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Observed behaviour	Response	Recorded Response (delete as appropriate)
- Use of fresh tap water	<input type="checkbox"/>	✓ Yes or * No or NA
- Use of boiled water	<input type="checkbox"/>	✓ Yes or * No or NA
- Smooths out measured powder	All <input type="checkbox"/> Some <input type="checkbox"/> None <input type="checkbox"/>	All; Some; None; NA
- Uses utensil to smooth out powdered formula	<input type="checkbox"/>	✓ Yes or * No or NA
- Utensil sterilised before use	<input type="checkbox"/>	✓ Yes or * No or NA
- Use of other items for smoothing out measured powder (state)	.....	..... or NA
Record time start water boiling.....	Boiling time average = 3/minutes	/
Cools boiled water in kettle	<input type="checkbox"/>	✓ Yes or * No or NA
Record time boiled water poured into bottle.....	/	/
Cools boiled water in bottle	<input type="checkbox"/>	✓ Yes or * No or NA
Boiled water remains covered during cooling	<input type="checkbox"/>	✓ Yes or * No or NA
Record time mix boiled water with pif.....	Time mix pif with water in mass averaged boiling time*	*Time..... or NA or >2hours in advance
Cooling		
- Cools boiled water in bottle	<input type="checkbox"/>	✓ Yes or * No or NA
At room temperature	<input type="checkbox"/> If ✓ state 'reported?' time.....	✓ Yes or * No or NA
Under running cold tap	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
In jug / bowl / washing up bowl of cold water (note as applicable) (note if change water)	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
- Cools reconstituted feed	<input type="checkbox"/>	✓ Yes or * No or NA
At room temperature	<input type="checkbox"/> If ✓ state 'reported?' time.....	✓ Yes or * No or NA
Under running cold tap	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
In jug / bowl / washing up bowl of cold water (note as applicable) (note if change water)	<input type="checkbox"/> If ✓ state time.....	✓ Yes or * No or NA
Storage in the home		
- Stores boiled water in fridge	<input type="checkbox"/>	✓ Yes or * No or NA
- Stores made up feed in fridge	<input type="checkbox"/>	✓ Yes or * No or NA
- State location in fridge	<input type="checkbox"/>	✓ Yes or * No or NA
- Stores boiled water at room temperature	<input type="checkbox"/>	✓ Yes or * No or NA
- Stores made up feed at room temperature	<input type="checkbox"/>	✓ Yes or * No or NA
- REPORTS refrigerated storage once cooled at room temperature	<input type="checkbox"/>	✓ Yes or * No or NA
- REPORTS length of time between room temperature and refrigerated storage	.....	State time
Storage and feeding away from the home		
- Storage of reconstituted feed – cool/insulated bag with cool packs	<input type="checkbox"/>	✓ Yes or * No or NA
- Storage of reconstituted feed – cool/insulated bag with NO cool packs	<input type="checkbox"/>	✓ Yes or * No or NA
- Storage of reconstituted feed – carrier bag / normal bag in ambient temperature	<input type="checkbox"/>	✓ Yes or * No or NA
- Carton of RTU formula	<input type="checkbox"/>	✓ Yes or * No or NA
- Takes flask with boiled water	<input type="checkbox"/>	✓ Yes or * No or NA
- Takes (segmented) container with measured pif	<input type="checkbox"/>	✓ Yes or * No or NA
- Other (please state)

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Recruitment Questionnaire

FSA Study B13R0003 Dr.E.Redmond, FIC, UWIC, 060610 Version 1




UWIC
Cardiff's metropolitan university
prifysgol metropolitan Caerdydd

**PREPARATION, STORAGE AND HANDLING
OF POWDERED INFANT FORMULA -
PARENTS**

**PHASE 3.1 BEHAVIOURAL STUDY
RECRUITMENT QUESTIONNAIRE**

APRIL, 2010



**FOOD
STANDARDS
AGENCY**

Q.1 INTERVIEWER RECORD GENDER

Male 1 → CONTINUE

Female 2 → CONTINUE

Q.2 HOW OLD ARE YOU?

Under 18 1 → CLOSE

18 – 24 2 → CONTINUE

25-34 3 → CONTINUE

35-45 4 → CONTINUE

46 or over 5 → CLOSE

Q.3 HOW OLD IS YOUR BABY?

1-2 months (0-4 weeks) 1 → CONTINUE

3-4 months (5-8 weeks) 2 → CONTINUE

5-6 months (9-12 weeks) 3 → CONTINUE

7-8 months (13-16 weeks) 4 → CONTINUE

9-10 months (17-20 weeks) 5 → CONTINUE

11-12 months (21-24 weeks) 6 → CONTINUE

12 months + (25+ weeks) 7 → CLOSE

SHOWCARD 1

Q.4 HOW DO YOU CURRENTLY FEED YOUR BABY?

Breast Feeding Only 1 → THANK & CLOSE

Mix of powdered formula & breast milk 2 → CONTINUE

Powdered Formula only 3 → CONTINUE

Q.5 YOU SAY THAT YOU CURRENTLY /SOMETIMES USE POWDERED FORMULA MILK TO FEED YOUR BABY. CAN YOU PLEASE TELL ME APPROXIMATELY HOW OFTEN YOU USE POWDERED FORMULA?

All or most feeds 1 → CONTINUE

At least once a day 2 → CONTINUE

Other 3 → THANK & CLOSE

FSA Study B13R0003 Dr.E.Redmond, FIC, UWIC, 060610 Version 1

Q.6 OCCUPATION OF CHIEF INCOME EARNER IN THE HOUSEHOLD

Job Title: _____ 1 → CONTINUE

Position/Rank/Grade: _____ 2 → CONTINUE

Refused 3 → THANK & CLOSE

IF SUCCESSFULLY SCREENED INVITE RESPONDENT TO PARENT IN THE STUDY:

As I said before, we are conducting a research study concerning different aspects of feeding babies under 12 months old with powdered infant formula, and would like to invite you to attend. The research involves preparation of powdered formula feeds in a model domestic kitchen in UWIC (Llandaff), followed by an interview about handling and storage of powdered formula milk. In total, participation will take about 1-1½ hours. You will receive a £20 supermarket voucher once you have finished.

IF PARENT IS WILLING TO ATTEND PREPARATION SESSION IN UWIC:

Arrange convenient time for attendance to UWIC for participation (Date, time etc). Record contact details below, then hand them invitation (with date of arranged attendance to uwic), participant information sheet and consent form.

Day / Date: _____

Time: _____

PARTICIPANT DETAILS:

Name: _____

Address: _____

Postcode: _____

Telephone Number: _____

FSA Study B13R0003 Dr.E.Redmond, FIC, UWIC, 060610 Version 1

SHOWCARD

Breast Feeding Only

**Mix of powdered formula &
breast milk**

Powdered Formula only



WANTED!

Mums and Dads who feed their baby with powdered infant formula

A researcher in the University of Wales Institute Cardiff (UWIC) is currently undertaking an important study for the UK Food Standards Agency about feeding babies with powdered infant formula.

If you feed your baby (aged less than 12 months) with powdered formula at least once a day, we would like to invite you to participate in our study by:

Making up powdered formula feeds in a domestic kitchen in UWIC and completing a short interview to share your thoughts and experiences of feeding your baby with formula. *Free transport to and from UWIC can be arranged if required.*

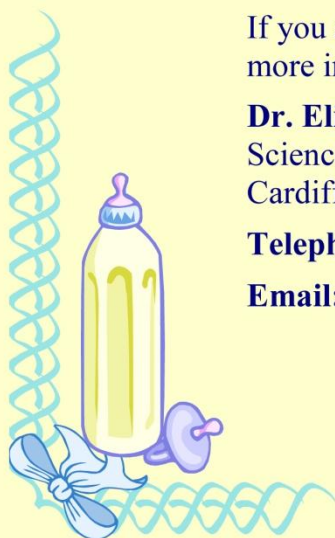
As a token of thanks, you will receive at least £20 store / supermarket vouchers.

If you are interested in participating in this study or would like more information please contact:

Dr. Elizabeth Redmond, Food Industry Centre, School of Health Sciences, University of Wales Institute Cardiff, Western Avenue, Cardiff, CF52YB

Telephone: 02920416452

Email: eredmond@uwic.ac.uk with your name & phone number



Please be assured that information such as your name and contact details will not be used, passed on or associated with research findings.

ASSURED ANONYMITY AND CONFIDENTIALITY

UWIC
Cardiff's **metropolitan** university
prifysgol **metropolitan** Caerdydd



Powdered Infant Formula Research PARTICIPATION July – October, 2010



Preparation of formula feeds in a domestic kitchen in UWIC, followed by interview.

We would like you invite you to the Llandaff Campus of UWIC to carry out the following:

- Attend an infant formula and food preparation session in a model domestic kitchen (~1hour).
- You will be asked to make-up 5 bottles of powdered infant formula and a simple chicken salad in a model domestic kitchen (see image).
- Please be assured that no special culinary or preparation skills are required for the session and all formula, bottles and equipment etc that you will need will be provided.
- You will have a chat with the researcher in an informal interview about how, when and where you prepare powdered infant formula feeds for your baby, discuss opinions and experiences of using formula and about information that you may have received or liked to have received about using formula.
- **As a token of thanks you will be given £20 store voucher for completing the preparation session and interview.**
- You may also be given the opportunity to participate in other parts of the study whereby additional supermarket / store vouchers are offered as a token of thanks.



Recruitment Advert

(Eg for My Valleys Magazine, North Cardiff Community Times etc)

Half page A5



WANTED!

Mums and Dads who feed their baby with powdered infant formula



An important study about feeding babies with powdered infant formula is taking place at the University of Wales Institute Cardiff (UWIC), August – October, 2010.

If you prepare powdered formula for your baby (aged less than 12months) at least once a day, we would like to invite you to participate in our study.

You will be asked to make up powdered formula feeds in a domestic kitchen in UWIC (Llandaff campus) and share your thoughts and experiences of feeding your baby with formula.

As a token of thanks, you will receive £20 supermarket vouchers

If you are interested in participating / would like more information
please contact: Dr. Elizabeth Redmond,
Tel: 02920416452; Email: eredmond@uwic.ac.uk



Mauds Baby Show



Telephone Protocol

- Thank you for calling / Follow up from meeting
- Confirm interest in participating in the study – coming into UWIC model kitchen in Llandaff campus of UWIC on Western Avenue (opposite big Tesco's) – familiar?
- You'll be asked to prepare 6 bottles of powdered formula and make a chicken salad in domestic kitchen in UWIC (~1 hour),
On your own in the kitchen – in next door
Afterwards chat about your experiences of using formula, information you've received etc
- All equipment and ingredients that is needed will be provided for.
- Supermarket / store vouchers - £10 preparing salad and bottles of formula and £10 for questionnaire/informal interview – ask where they'd like vouchers from – Sainsbury's, Tesco's, Asda, Mothercare or Boots. **RECORD**
- Everything OK so far?? any questions
- Make Date / time arrangements for attending pif / food preparation session. **CHECK ONLINE BOOKING AND RECORD**
- Inform participant they will be sent:
Letter confirming these arrangements
Map of where UWIC is, where to park and where reception is on campus, Information sheet about the study and parent participation
A copy of the recipe and formula preparation instructions –for reference
- Confirm type of steriliser used for preparing bottles **RECORD**
- Parking?
Drive through the barrier to car park in back of UWIC (if barrier down or car park attended there press buzzer & say meeting with Liz Redmond for 'Food Standards Agency Research'
I'll try to reserve a space – limited availability – let you know in the letter.
If not you'll need to pay and display 60p per 4.5hours.
- **Entrance** to the reception = middle of campus at the moment as building work at the front – map and well signposted.
At reception ask them to call me (extension 6452) and I will come and meet you
- At end interested in datalogger study we can talk about that when you come to UWIC – *Yes or No record*
- Where did you see poster / leaflet? (Record)
- **Reiterate date, day and time of practical and place**, Look forward to seeing them then.
Not to worry about anything, hopefully enjoy practical too!

Confirmation letter sent to all participants

(headed paper)

Dear

On behalf of the Cardiff School of Health Sciences in the University of Wales Institute, Cardiff (UWIC), I would like to thank-you for agreeing to participate in the 2007-2010 Food Standards Agency Powdered Infant Formula research study being undertaken in UWIC.

As discussed, this important nationwide study aims to determine how different caregivers, including parents, prepare and store powdered infant formula inside and outside of the home. Cumulatively data will be used to inform the development of powdered infant formula information sources.

As you will recall, we have made the following arrangements for you to attend a powdered formula and food preparation session, followed by interview:

Date:

Time:

Location: Food Industry Centre, UWIC Llandaff campus, Western Avenue, Cardiff CF5 2YB.

Please report to the reception of your arrival and wait to be collected by Elizabeth Redmond

For your reference, I have taken this opportunity to enclose the following:

- A plan for the formula preparation session and interview, where you are given the opportunity to share your experiences and opinions about using powdered infant formula.
- The participant information sheet.
- A map and details about finding UWIC Llandaff Campus/reception

I am extremely grateful for your participation with the research, and as a token of my thanks you **will receive vouchers totalling £20** from either Sainsburys, Marks and Spencers, Tesco's, Boots or Mothercare. You will receive a £10 voucher for completion of the formula preparation session in the model kitchen and a £10 voucher for completion of the questionnaire / interview.

May I take this opportunity remind you that no special culinary/formula preparation skills are needed to take part in the study and all formula, ingredients, bottles and equipment needed will be provided in the model kitchen. Please be assured that all data collected during the study will remain anonymous and treated in the strictest of confidence.

If you require any further information or for any reason you will be unable to attend the preparation session and interview, please do not hesitate to contact me at UWIC on Cardiff 2041 6452.

I look forward to meeting you.

Yours Sincerely,

Dr Elizabeth Redmond
Research Fellow
eredmond@uwic.ac.uk

Participant Information Sheet

Powdered Infant Formula Research, 2010

Participant Information: Model Kitchen



For parents feeding their infant(s) aged less than 12 months with powdered infant formula

We would like to invite you to take part in an important Powdered Infant Formula Research Study being carried out at the University of Wales Institute, Cardiff. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish. We are happy to provide you with more information or answer anything that is unclear. Thank you for considering this study.

Background and Purpose of the Study

In the UK, 92% of parents use powdered infant formula to feed their baby within 6 months after birth. Given the widespread use of powdered formula, preparation, handling and storage methods used for powdered formula feeds are relevant to many parents and caregivers in homes, hospitals and day nurseries. Currently relatively little is known about (a) how parents or caregivers deal with infant feeds or (b) what information about preparation and storage of powdered infant formula is obtained/given to them and where from.

This cumulative Food Standards Agency funded project (2007-2010) (B13R0002) seeks to address this lack of information and in previous phases of the study has involved participation from NHS Health Visitors, Hospital and Community Midwives, Hospital Nurses and Day Nursery Nurses from Wales, England, Scotland and Northern Ireland.

Ultimately, determining parents' practices, opinions and experiences of using powdered infant formula at home and away from the home is essential. Research findings will inform the development of guidelines and intervention materials for use in the home and in hospitals.

Why have you been invited to take part in this study?

You have been invited to take part because you are an adult living in South Wales and have indicated that you are currently feeding your infant (aged less than 12 months) with powdered infant formula at least once a day. We anticipate that you will be one of 400 parents who will take part in the overall study.

What will your participation involve?

If you choose to participate, we would like you to come to the Llandaff Campus of UWIC to carry out the following:

- A) An infant formula and food preparation session, whereby you make-up 5 bottles of powdered infant formula and a simple chicken salad in a model domestic kitchen (see image). Please be assured that no special culinary or preparation skills are required for the session and all formula, bottles and equipment etc that you will need will be provided. Preparation sessions are expected to take approximately 1 hour. Sessions in the model kitchen will be digitally recorded and will only be accessible and reviewed by Dr. Liz Redmond.

As a token of thanks you will be given £10 supermarket voucher for participating in Part A of the study.



- B) In an informal interview, talk to the researcher (Dr Liz Redmond) about how, when and where you prepare powdered infant formula feeds for your baby, discuss opinions and experiences of using powdered infant formula and about information that you may have received or liked to have received about preparation, handling and storage methods from professional / non-professional sources.

Interviews will take approximately 45 minutes and will be digitally recorded. Recordings will only be accessible and reviewed by Dr. Liz Redmond.

As a token of thanks you will be given £10 supermarket voucher for participating in Part B of the study.

You will be asked to give your consent to participate in each stage of the study.

Do you have to take part?

Participation in this study is entirely voluntary. If you decide to take part you are still free to withdraw from the study at any time without giving a reason.

How will information be kept confidential?

- All information that is collected from you during the course of study will be kept strictly confidential.
- All material / recordings will be securely destroyed after the end of the study or on your withdrawal from the study.
- Your information will not be used or made available for any purpose other than for this research study.
- All of your digital recordings, interview and study data will be assigned an ID so that you can not be recognised from it. With your permission, this information will be stored in UWIC on a password protected computer / locked filing cabinet.

What are the benefits of taking part?

- For participating in the both parts of this study you will be given **£20 voucher of your choice from either Tesco's, Sainsburys, Asda, Morrisons, Boots, Mothercare or Marks and Spencers.**
- Free tea, coffee and biscuits will be provided during the study.
- Whilst there are no immediate benefits for you participating in the project it is hoped that the study provides the opportunity for you to express your opinions and experiences which will cumulatively contribute to the improvement of future powdered infant formula guidelines and intervention materials for use in the home and in hospitals.

Are there any risks or disadvantages for taking part?

All aspects of the project have been risk assessed; the only risks in the UWIC domestic kitchen are as in your own home kitchen, involving sharp objects such as knives, and hot equipment such as the sterilizers, boiled kettle/water, hot water tap, the oven and stove. In the unlikely event of harm or injury, treatment will be given by a first aider.

What happens to the results of the research?

All information provided by you will be stored anonymously on a computer, with the analysis of information obtained undertaken by Dr. E Redmond. The results of this study will be presented to the UK Food Standards Agency in a confidential report. Cumulative, non identifiable research findings may be published in peer-reviewed journals and conference presentations.

Who can you contact for more information?


Dr Elizabeth(Liz) Redmond, Research Fellow, Food Industry Centre, Cardiff School of Health Sciences, Llandaff Campus, University of Wales Institute, Cardiff, CF52YB.
Telephone: 02920 416452 Email: eredmond@uwic.ac.uk

Please note, there are no baby changing facilities in UWIC and it is recommended that where possible, you do not bring your baby to UWIC while participating in this study.


This study has been reviewed and approved by the Ethics Committee of UWIC UREC Reference:2245 Version 1, May, 2010.

This study has been reviewed and approved by the Ethics Committee of UWIC UREC Reference:2245 Version 1, May, 2010.

Instructions sent to parents before participating – for reference purposes



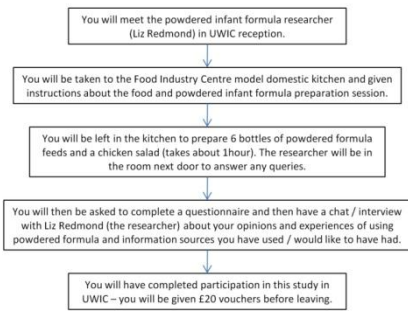
UWIC
Cardiff Metropolitan University
prifysgol metropolitan Candiysdd



FOOD STANDARDS AGENCY

Powdered Infant Formula Research, 2010
Instructions for powdered infant formula and food preparation in UWIC model kitchen

See flow diagram below for an overview of plan for parent participation in powdered infant formula and food preparation session in the UWIC model domestic kitchen.



```

graph TD
    A[You will meet the powdered infant formula researcher (Liz Redmond) in UWIC reception.] --> B[You will be taken to the Food Industry Centre model domestic kitchen and given instructions about the food and powdered infant formula preparation session.]
    B --> C[You will be left in the kitchen to prepare 6 bottles of powdered formula feeds and a chicken salad (takes about 1hour). The researcher will be in the room next door to answer any queries.]
    C --> D[You will then be asked to complete a questionnaire and then have a chat / interview with Liz Redmond (the researcher) about your opinions and experiences of using powdered formula and information sources you have used / would like to have had.]
    D --> E[You will have completed participation in this study in UWIC – you will be given £20 vouchers before leaving.]
            
```

When in the model kitchen, you will be asked to complete tasks A and B:

TASK A: Prepare a simple Chicken and Pesto Salad – to be served for ‘immediate consumption’.
The recipe is noted below for your reference.

Recipe: Chicken and Pesto Salad

Ingredients

- 1 chicken breast (with skin)
- 10 ml / ½ tbsp vegetable oil
- salt and pepper
- ½ Iceberg lettuce, chopped
- 1 tomato, chopped
- 1 spring onion, sliced
- 2-3 slices of cooked ham
- 10ml / ½ tbsp pesto
- chopped mixed herbs


Method

1. Remove skin from chicken breasts.
2. Chop chicken into suitably sized pieces and shallow fry using 1 tbsp vegetable oil.
3. Mix pesto with the cooked chicken pieces.
4. Prepare all salad vegetables.
5. Cut the slices of ham into small pieces.
6. Mix cooked chicken (with pesto), pieces of ham and salad vegetables
7. Season to taste using chopped mixed herbs and any additional salt and pepper.
8. Serve one portion of the salad on the table as if to be consumed immediately.


Task B: Prepare infant feeding bottles and made-up powdered infant formula feeds:

- You will be provided with 6 used infant feeding bottles with residues of made-up powdered infant formula.
- Please clean all 6 bottles ready for addition of formula, using the type of cleaning / sterilizing equipment that you would usually use at home.

B.1. Leave 1 bottle empty after cleaning, ready for addition of formula and subsequent feeding (e.g. see image below).



B.2. Make-up 1 bottle of reconstituted powdered infant formula. Place on the table when you consider the feed is ready for immediate feeding (i.e. suitable temperature etc) (e.g. see image below).



B.3. Prepare 3 bottles of powdered infant formula for feeding in more than 2 hours time in your own home. Carry out practices that you would usually use at home (e.g. see images below).
If you never prepare powdered formula feeds / bottles in advance of use, please do so for this research in the way that you think that you might if required to do so at home in the future



B.4. With the 1 remaining bottle, demonstrate how you would usually deal with feeding your infant with formula when away from the home when no fresh, boiled water is available (e.g. see image below).



If you have any queries or require more information please contact:
Dr Elizabeth (Liz) Redmond, Research Fellow, Food Industry Centre, Cardiff School of Health Sciences, Llandaff Campus, University of Wales Institute, Cardiff, CF52YB.
Telephone: 02920 416452 Email: eredmond@uwic.ac.uk

PROTOCOL: Participant PIF and food preparation session in UWIC.

- Meet participants in UWIC reception – bring to FIC / Model Kitchen
- Thank participant for coming ~ introductions
- Check information was received through the post OK
- Standard Questions ~ conversation – context of the study etc.
- Immediately go to model kitchen ~ represent a typical domestic environment
- Reiterate what pif and food is to be prepared > prepare 6 bottles of powdered formula and a chicken salad.

FIC Model Kitchen (D1.29)

- On arrival to model kitchen, any questions re information sheets sent to participant
- Outline plan – participant prepares bottles of formula and chicken salad in the kitchen, then we'll finish with informal interview.
- Confirm voucher type.

- Confirm which steriliser usually use at home – remove all other types from the kitchen
- Ask which brand of powdered infant formula participant usually uses (see examples in cupboard)
- Familiarisation with kitchen - explanation of where everything is stored (open cupboards), demonstration of cooker, kettle and microwave controls
- Give participant instructions for sterilizers, cooker, kettle and microwave controls

- Emphasise - no tricks, no right or wrong way of preparation, just interested in how bottles of formula are prepared by parents, no good and bad practices, just how parents prepare food and formula in the home

- All information from the surveys and practicals will be treated with a confidential nature – all anonymous
- Consent form – ensure sign and collected & participant happy to progress
- Completion of the practical will occur when meals are served and the kitchen is left as it would be in the home
- Inform participant knock on door next door / ring bell when finished.

- Clarify queries with participant

After initial preparation time of 15-20 minutes researcher (in room next door) will check the participant has no problems and all is going well.

Informed Consent Form

PARTICIPANT_ID.....

Powdered Infant Formula Research, 2010



**Parent Consent Form:
Formula / food preparation session and interview**



*Please
tick each box*

1. I agree to participate in the UWIC / Food Standards Agency Research powdered infant formula (PIF) /food preparation session and subsequent interview.
2. I confirm that I have received and understand the Participant Information Sheet for the PIF /food preparation session and subsequent interview.
3. I have received and understand the instructions required to participate in this PIF / food preparation study and agree to carry out such methods.
4. I agree that my PIF / food preparation session may be digitally recorded and I understand that data will only be accessed by Elizabeth Redmond. Recordings will be deleted after the end of the study.
5. I agree that my interview discussion about PIF use and sources of information may be digitally recorded and anonymous quotes may be used in academic writing related to the study.
6. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason
7. I understand that all information gathered from the study will remain confidential and data reported will be anonymous.
8. I have had the opportunity to ask any questions about taking part in the study.

.....
Name of participant	Date	Signature

.....
Name of researcher	Date	Signature

Powdered infant formula instructions provided in model kitchen

Task B: Prepare infant feeding bottles and made-up powdered infant formula feeds:

- You have been provided with 6 used infant feeding bottles with residues of made-up powdered formula.
- Please clean all 6 bottles ready for addition of formula, using the type of cleaning / sterilizing equipment that you would usually use at home.

B.1. Leave **1 bottle** empty after cleaning, ready for addition of formula and subsequent feeding (e.g see image below).



B.2. Make-up **1 bottle** of reconstituted powdered infant formula. Place on the table when you consider the feed is ready for immediate feeding (i.e. suitable temperature etc) (e.g see image below).



B.3. Prepare **3 bottles** of powdered infant formula for feeding in more than 2 hours time in your own home. Carry out practices that you would usually use at home (e.g. see images below).

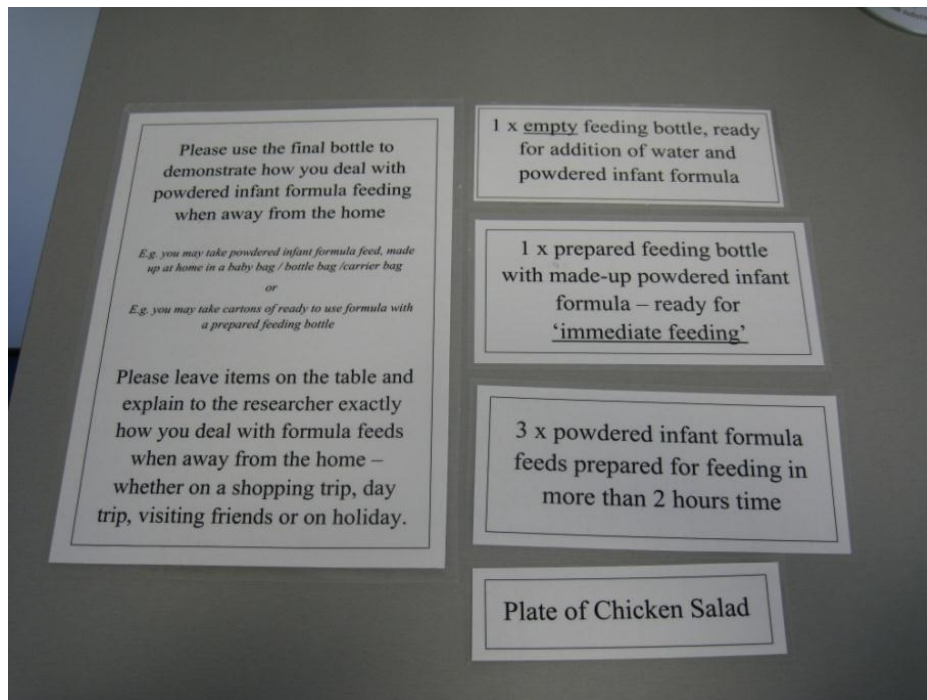
If you never prepare powdered formula feeds / bottles in advance of use, please do so for this research in the way that you think that you might if required to do so at home in the future



B.4. With the 1 remaining bottle, demonstrate how you would usually deal with feeding your infant with formula when away from the home when no fresh, boiled water is available (e.g. see image below).



Powdered infant formula instructions provided in model kitchen (continued)



Chicken Salad Recipe

Ingredients

- 1 chicken breast (with skin)
- 10 ml / ½ tbsp vegetable oil
- salt and pepper
- ¼ Iceberg lettuce, chopped
- 1 tomato, chopped
- 1 spring onion, sliced
- 2-3 slices of cooked ham
- 10ml / ½ tbsp pesto
- chopped mixed herbs

Method

1. Remove skin from chicken breasts.
2. Chop chicken into suitably sized pieces and shallow fry using 1 tbsp vegetable oil.
3. Mix pesto with the cooked chicken pieces.
4. Prepare all salad vegetables.
5. Cut the slices of ham into small pieces.
6. Mix cooked chicken (with pesto), pieces of ham and salad vegetables
7. Season to taste using chopped mixed herbs and any additional salt and pepper.

Serve one portion of the salad on the table as if to be consumed immediately.

Microbiological Sampling of Prepared Infant Feeding Bottles, Reconstituted Feeds and Environmental Kitchen Surfaces, Post-Observation Session

<i>Sample_ID</i>	<i>Sample location</i>	<i>ATP / Micro sampling</i>
E-R	Prepared bottle: rinse	ATP, ACC, Entero, <i>S.aureus</i>
E-OR	Prepared bottle: outer rim	ATP, ACC, Entero, <i>S.aureus</i>
E-IT	Prepared bottle: inner teat	ATP, ACC, Entero, <i>S.aureus</i>
E-SC	Prepared bottle: inner screwcap	ATP, ACC, Entero, <i>S.aureus</i>
I-F	Immediate PIF feed 1: feed	ACC, Entero, <i>S.aureus</i>
I-OR	Immediate PIF feed 1: outer rim	ATP, ACC, Entero, <i>S.aureus</i>
A2-F/R	Advance PIF feed 2: feed / rinse /boiled water	Feed – ACC, Entero, <i>S.aureus</i> Boiled water / rinse = ATP, ACC, Entero, <i>S.aureus</i>
A2-OR	Advance PIF feed 2: outer rim	ATP, ACC, Entero, <i>S.aureus</i>
A3-F/R	Advance PIF feed 3: feed / rinse /boiled water	Feed – ACC, Entero, <i>S.aureus</i> Boiled water / rinse = ATP, ACC, Entero, <i>S.aureus</i>
A3-OR	Advance PIF feed 3: outer rim	ATP, ACC, Entero, <i>S.aureus</i>
A4-F/R	Advance PIF feed 4: feed / rinse /boiled water	Feed – ACC, Entero, <i>S.aureus</i> Boiled water / rinse = ATP, ACC, Entero, <i>S.aureus</i>
A4-OR	Advance PIF feed 4: outer rim	ATP, ACC, Entero, <i>S.aureus</i>
A5-F/R	Advance PIF feed 5: feed / rinse /boiled water	Feed – ACC, Entero, <i>S.aureus</i> Boiled water / rinse = ATP, ACC, Entero, <i>S.aureus</i>
A5-OR	Advance PIF feed 5: outer rim	ATP, ACC, Entero, <i>S.aureus</i>
1	Preparation surface 1 (where PIF prepared)	ATP, ACC, Entero, <i>S.aureus</i>
2	Preparation surface 2 (where raw chicken prepared)	ATP, ACC, Entero, <i>S.aureus</i>
3	Tap handle 1 – Hot	ATP, ACC, Entero, <i>S.aureus</i>
4	Tap handle 2 – Cold	ATP, ACC, Entero, <i>S.aureus</i>
5	Kettle handle	ATP, ACC, Entero, <i>S.aureus</i>
6	Fridge handle	ATP, ACC, Entero, <i>S.aureus</i>
7	Dishcloth / Scourer	ATP, ACC, Entero, <i>S.aureus</i>
8	T-towel	ATP, ACC, Entero, <i>S.aureus</i>
9	Hand towel	ATP, ACC, Entero, <i>S.aureus</i>

Petrifilms - Direct contact

Petrifilms - Swab

ATP Cleantrace Water

ATP Cleantrace Surface

Validation of cleaning protocol

Surface	ATP/10cm ²			ACC cfu/10cm ²			<i>Enterobact</i> <i>-eriacae</i> cfu/10cm ²	<i>S.aureus</i> cfu/10cm ²
	Mean	SD	Range	Mean	SD	Range		
Work Surface	20	7	15-33	2.0	3.5	0-10	NG	NG
Tap handle	24	6	11-32	0	0	0	NG	NG
Kettle handle	29	10	17-49	0	0	0	NG	NG
Fridge handle	23	10	14-44	0	0	0	NG	NG
TT	26	6	18-36	1.0	2.1	0-5	NG	NG
HT	47	19	27-70	1.5	3.4	0-10	NG	NG
Scourer pads	27	15	11-58	4.0	4.6	0-10	NG	NG
Fine weave / J cloth	22	9	12-38	1.5	3.4	0-10	NG	NG