



Equipment and Utensils Guidelines for the National School Nutrition Programme



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

FOREWORD

The equipment and utensils guidelines for the National School Nutrition Programme (NSNP) are yet another milestone in the programme. With the NSNP now providing an almost universal cooked menu, the procurement of quality, durable and affordable food preparation and serving equipment and utensils is a priority.

The Department of Basic Education is pleased with the allocation for equipment that has been provided by National Treasury through the programme over the past number of years.

It is our hope that managers in schools, at district and provincial level will use these guidelines to ensure that equipment of the best value is procured to ensure quality, safe and nutritious meals.

We urge school management teams, volunteer food handlers and community members to take good care of these valuable assets and ensure that they are added to the asset stock registers of each school.

Siyadla • Siyafunda • Sinamandla!!

MS GT Ndebele

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ACRONYMS

DBE	Department of Basic Education
DoH	Department of Health
HACCP	Hazard Analysis Critical Control Point
LP	Liquefied Petroleum
NSNP	National School Nutrition Programme
NGO	Non Governmental Organisation
PED	Provincial Education Department
SGB	School Governing Body
SABS	South African Bureau of Standards
VFH	Volunteer Food Handler

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PURPOSE OF THE DOCUMENT

The purpose of this guideline is to set minimum requirements of basic cooking equipment and utensils required to implement a sustainable National School Nutrition Programme. It is intended to provide guidance to Provincial Education Departments, districts and schools in selecting quality and durable equipment and utensils for the programme to ensure that learners are served with quality, nutritious and safe food in a dignified manner. The guideline further provides information on basic items required for establishing a conducive and hygienic food preparation area for mass catering in schools.

The specifications in this guideline will guide and support provinces and schools in the process of procuring quality equipment. This will ensure that public funds are invested in durable equipment, enabling learners to be served with safe food and with dignity. The guideline however does not restrict any school from procuring good quality equipment not mentioned herein. All cooking equipment and utensils procured for the programme **must** comply with the South Africa Bureau of Standards (SABS).

PART A: NSNP GUIDELINES

1. RECOMMENDED MATERIALS FOR EQUIPMENT

The quality of the product should be taken into consideration when selecting equipment and utensils for mass catering. The material should be durable, easy to maintain and cost effective. Stainless steel is highly recommended. Aluminium and Polypropylene Plastic (strong plastic) are also acceptable for use and must comply with South African Bureau of Standards (SABS). Products made of these materials comply with the Hazard Analysis Critical Control Points (HACCP) principles which ensure food safety. Products made of wood (e.g. chopping boards, wooden spoons, etc.) **should be avoided** at all cost as they maximize the risk of cross-contamination.

a. Stainless steel

The NSNP highly recommends the use of stainless steel for eating utensils such as plates, cutlery and mugs as well as preparation surfaces such as tables and sinks.

Why stainless steel for kitchen utensils?

- * It is one of the most hygienic materials for the preparation of foods and is very easy to clean, as its unique surface has no pores or cracks to harbour dirt, grime or bacteria.
- * It is very attractive and requires minimal care, since it won't chip or easily rust.
- * It will not affect flavour, as it does not react with acidic foods during food preparation or cooking.
- * With proper care, it has a useful life expectancy of over 100 years, and is totally recyclable.

b. Aluminium

Aluminium is very popular due to its low cost and quick heating. The main problem with aluminium is that it reacts with some types of foods, especially with those with alkaline or acidic components.

c. Polypropylene Plastics

Polypropylene is tough plastic material which is exceptionally resistant to many chemical solvents, acids and bases. Containers made of polypropylene are durable.

Did you know?

Stainless steel contains a mixture of metals that reduces the effects of rust that can be caused by moisture or air. If not properly maintained, stainless steel can actually stain and corrode.

Aluminium contains particles that might penetrate into food. E.g. Do not cook tomato sauce in an aluminium pot.

Polypropylene is more resistant to high temperatures, more rigid, and tougher than ordinary plastic. It has good resistance to wear, chemicals, detergents, and cracking.



How to Decide?

Choosing between aluminium or stainless steel cookware is all about the cost and cooking needs. For schools with a limited budget, aluminium may be a more affordable choice. On the other hand, for schools that have sufficient money and are looking for quality durable cookware, stainless steel cookware is the best option.

2. MAINTENANCE AND CARE OF EQUIPMENT

Preventative maintenance of kitchen equipment can be as easy as on one line cleaning and servicing equipment. Cleaning is a fairly simple process, whatever material you choose. Aluminium and stainless steel can be washed with liquid detergent or be put in the dishwasher machine.

Most kitchen equipment is made from stainless steel. Its shiny non-porous structure resists bacteria, making it a perfect material for foodservice. The best way to maintain stainless steel is to keep it clean. By maintaining both exterior and interior surfaces of stainless steel, the life span of kitchen equipment can be extended. The film of chromium on the surface is what makes it so durable.

Things to keep in mind

- **Bleach and chlorine do more harm than good.**
While bleach is guaranteed to wipe out bacteria, it can cause more harm than good to stainless steel surfaces. It breaks down the protective film on your stainless steel. An ammonia solution is suitable to use in its place.
- **Never use rough abrasive sponges and steel wools.**
These rough cleaning utensils scratch the surface of your stainless steel making it more susceptible to rust.
- **Rinse the surface after cleaning.**
Any residual soaps or detergents can be harmful if left for a long period of time. Also they leave less than flattering streaks on your surfaces.
- **Only use stainless steel cleaners as a last resort.**
Over time, scratches and stains do happen. If they cannot be taken care of by using simple cleaning procedures, then a stainless steel cleaner can be used. Be sure to read the directions before applying the cleaner.

3. MINIMUM EQUIPMENT AND UTENSILS REQUIRED FOR THE NSNP

Item	Quantity required (for: 350 learners and less)	Quantity required (350 learners and more)
3 Plate gas burners	1 x 3 gas burners	2 x 3 gas burner
Gas Cylinder	2 gas cylinder	3 gas cylinder
Stainless Steel or Aluminum heavy Duty Cooking Pots 60lt	3 x 60lt pots	6 x 60lt pots
Polypropylene plastic or stainless steel long cooking spoons (e.g. Pap stirrer)	3 long cooking spoons	6 long cooking pots
Stainless steel work table	2 tables	4 tables
Serving utensils required are determined by number of learners and serving points <i>(An example of 500 learners per school and 17 serving points will be used)</i>		
Stainless steel table spoons	500 spoons	
Stainless steel or plastic serving spoons	51 spoons (17 for starch, 17 protein, 17 vegetables)	
Stainless steel plates	500 plates	
Stainless steel or plastic serving containers	51 containers (17 for starch, 17 protein, 17 vegetables)	

4. REFERENCES

1. The international system ISO 22000. ... "Managing Food Safety: A HACCP Principles Guide for Operators of Food Safety".
2. www.catercommercial.co.za
3. BCE Food Service Equipments: Buyers Guide Edition 5
4. Cambro 2008 product Catalog
5. <http://www.fantes.com/stainless-steel.html>
6. <http://plastics.inwiki.org/>
7. <http://www.sooperarticles.com/>
8. Food Service in Institution, Bessie B. West LeVelle Wood, 6th edition

PART B: CATALOGUE OF COOKING EQUIPMENT AND UTENSILS

NB: Schools are advised to contact the accredited dealers for detailed product specifications and samples before placing a purchasing order.



Must Have



Nice to Have

a. Food Storage Equipments

Item Description	Item Specification	Item Picture	Usage and Tips
Stainless Steel Food Storage Shelve			<p>Food storage shelving sits ideal for organizing food storage and space saving- it's easy to find what you need fast. Organize your products by type - baking, cooking, condiments, etc.</p> <p>Make sure all items are labeled.</p> <p>Turn labeled items so that their label is facing out.</p> <p>When you restock, put newer items at the back of the shelf, behind the older ones. Use older items first.</p> <p>As a general note, regularly check expiry dates on all food products.</p>









Item Description	Item Specification	Item Picture	Usage and Tips
Food Box Storage Container with Lid 	Made of tough polypropylene- different size available		Food Storage containers ideal for storing grocery such as spices, rice, soya, etc. in the dry storage area.
Ingredient Bin Heavy Duty with lids and Mobile Dolly 	Different sizes available		Store dry ingredients such as mealie meal, samp, rice, etc.

b. Pre-Preparation Equipment & Utensils

Item Description	Item Specification	Item Picture	Usage and Tips
Stainless steel work table 			To use as preparation table e.g. cutting vegetables. Should be made from a material that is easy to keep clean. Stainless steel and aluminum are preferred materials. There is wide range of work table and they come in a number of sizes, styles and materials, work tables with flat designs, with backsplashes, multiple shelves for extra storage space to your kitchen needs.

Item Description	Item Specification	Item Picture	Usage and Tips
Industrial platform scales 			<p>Scales that could be operated by conventional alkaline batteries are available allowing the freedom to use a scale anywhere without the constraints of power sockets.</p> <p>To measure dry ingredients (mielie meal, samp, etc) during food preparation according to the recipes instructions.</p> <p>Ideal for receiving goods and stock checks.</p>
Industrial food processor (vegetable cutter) 			<p>It allows fast preparation of large volumes of vegetables, fruits and vegetables. It contains different blades/discs (graters, shredding, dicing, julienne, etc) that are suitable to slice vegetables into different shapes.</p>
Measuring jugs- stainless steel or plastic 	Sizes: 500ml 1 Lt 2 Lt		<p>To measure fluids (water, oil, etc) during food preparation according to the recipes instructions</p>

Item Description	Item Specification	Item Picture	Usage and Tips
<p>Measuring cups- stainless steel or plastic</p> 	<p>Includes 1/4-, 1/3-, 1/2-, and 1-cup nesting scoops</p>	 	<p>Measuring flavorings and for large scale recipes</p>
<p>Can Opener – industrial mounted</p> 	<p>Can Opener with clamp, spare wheel and spare blade. Opener is self adjusting for can height.</p>		<p>Opens cans of all shapes and sizes: round, square, oblong, oval and even dented cans.</p>
<p>Cutting boards- polypropylene plastic material</p> 	<p>Available in different colors which are ideal for eliminating the cross contamination of foods- HACCP (Harzard Analysis Critical Control Principles) compliant.</p>		<p>To use during food preparation. White-Dairy and Bakery products e.g cheese Blue-Fish/Yellow-Poultry (chicken)/Green-Raw Vegetables/Red —Raw Red Meat/Brown-Cooked Meats</p>

Item Description	Item Specification	Item Picture	Usage and Tips
<p>Cooks' knives – one standard size for schools</p> 	<p>Ranges from 15 cm to 36 cm in length</p>		<p>Knives are cutting tools used in food preparation for peeling and chopping.</p>
<p>Cooking Spoons- Plastic or Stainless Steel</p> 	<p>Length of - 600mm, 1200mm and 1500mm</p>		<p>Used to stir during cooking e.g soft porridge, pap, samp; vegetable, soya, beans stew, etc. Use of stirrer with plastic and/or stainless steel is recommended. Wood material is a food safety hazard, bacteria grows easily on wet wood.</p>
<p>Basting Spoons- Stainless Steel</p> 	<p>Total length- 330mm & 400mm</p>		<p>Used to stir or mix These are offered in solid, slotted and perforated (could be used to drain oil during cooking e.g. fried soya mince balls).</p>

Item Description	Item Specification	Item Picture	Usage and Tips
6 Sided Grater- Stainless Steel 	With six grating sides Stainless steel grating surface No-slip base		For multi grating of vegetables (carrots; cabbage; beetroot, etc) and cheese. Surfaces include: fine, extra fine, julienne, medium, coarse, slice

c. Cooking Equipment & Utensils

Item Description	Item Specification	Item Picture	Usage and Tips
3 plate gas burner 	2x3 burner boiling tables		<p>Installation of Gas Stove:</p> <ul style="list-style-type: none"> ● Supply and install 2x3 burner boiling tables (SABS approved) <p>Specification:</p> <ul style="list-style-type: none"> ● To install 2x48kg cylinders on a 1 on 1 off basis ● Supply and install the necessary regulator and change- over valve (SABS approved) ● All cylinders shall be installed outside on a concrete surface and in a lockable steel cages (SABS approved) ● Complete all piping and fittings. ● Supply and install manifolds (SABS approved). ● The quotation for the installation shall offer prices for all equipment in regard to installation excluding 48kg LPG gas cylinders. ● Supply and install 9kg fire extinguishers (SABS approved)

Item Description	Item Specification	Item Picture	Usage and Tips
LP gas cylinders and steel cage for gas cylinder storage 	48kg x 2 gas cylinder		 <p>Gas Safety:</p> <ul style="list-style-type: none"> Gas cylinders should be located outdoors, preferably in a secure cage protected from sunlight. Storage indoors is not recommended unless the building has been designed for that purpose with appropriate fire rated walls and ventilation. Store gas cylinders in well ventilated areas to prevent build up of escaped gases. <p>NB: Volunteer Food Handlers should receive proper training on the Gas Usage.</p>
Stainless steel cooking pots with lids 	60 Lt (500 x 310mm) - SABS approved: <ul style="list-style-type: none"> 18/10 Stainless Steel in 2mm thickness, satin finished. Long lasting Thermo diffusing sandwich base: Stainless steel/ Aluminum/ Stainless 		<ul style="list-style-type: none"> Used for cooking e.g. porridge, rice, stamp, vegetable, fish stew, etc. Stainless steel cookware is very resistant and durable, resists to almost any kind of scratches and is also easy to clean.

Item Description	Item Specification	Item Picture	Usage and Tips
Aluminum cooking pots 	<ul style="list-style-type: none"> 99.5% extra heavy pure aluminum, satin finished Extra heavy duty base Use on any heat source including an open flame Tough durable 		<ul style="list-style-type: none"> Cooks choose stainless steel over Aluminum cookware. The reason for this is because unlike Aluminum cookware, the stainless steel does not react to alkaline or acidic foods that are cooked in it.

d. Serving Equipment & Utensils







Item Description	Item Specification	Item Picture	Usage and Tips
Stainless steel food trolley 			The trolley could be used to distribute food containers to the classrooms.

Item Description	Item Specification	Item Picture	Usage and Tips
Stainless steel gastronorms (containers) with lids 	25Lt and 15 Lt capacity		(2x 15L for vegetable and protein and 1 x 25L for starch) with lids for serving in classes (3 per class)
Chafing dishes, ethanol fuel gel refill and fuel holder. 			Chafing dishes are a server unit used to keep cooked food at a servable temperature. Fuel is designed to provide a safer, hotter and more useful flame to keep your food hot and ready to serve for up to two hours.
Serving spoons: Ladles – stainless steel and portion servers - stainless steel with plastic handles 	Capacity of Scoop: 125 ml 250 ml		3 serving spoons- 125 ml for vegetables and protein, 250 ml for starch. 125 ml green Spoon 250 ml blue Spoon

e. Eating Crockery and Cutlery

Item Description	Item Specification	Item Picture	Usage and Tips
Dinner Plate; bowls and cups-stainless steel or polypropylene plastics 	Dinner plate - 235mm x 15mm Cereal Bowl - 235mm x 35mm Cup - 220ml		Learners use for eating. Stainless steel and polypropylene plates are durable and long lasting
Standard table spoon, table fork and table spoon- stainless steel 			Learners use to eat with.





f. Cleaning Equipment

Item Description	Item Specification	Item Picture	Usage and Tips
 Cleaning buckets	Single and Double bucket		Used for cleaning and disinfecting with mop. Buckets with two compartments, use one compartment for cleaning detergent solution and one for clean water to rinse.
 Mop and broom	Plastic or Aluminum handle		Always sweep the floor with broom before cleaning and disinfecting with a mop.
 Waste bin or recycling waste bin	Metal or plastic with lids		Have separate bins for papers, cans and food waste. Line the bin with plastic bags. Keep the bin closed at all times. Bin should be emptied and cleaned daily. NB: Collection of waste cans for fish can be collected for re-cycling/re-sale. Organic waste can be used for compost.

g. Protective Clothing

Item Description	Item Specification	Item Picture	Usage and Tips
<p>Light coloured bib apron and head gear</p> 	<p>Poly/Cotton blend material</p>		<p>Butcher material is recommended as it does not catch fire easily. Always wear clean hat, "doek" to cover your head to prevent hair or sweats from dropping into food during preparation.</p> <p>Poly/cotton blend contains materials that are resistant to fire flames and stains (material is easy to wash). Light coloured material is recommended for hygiene practices - dirt is more visible in light colours.</p>
<p>Latex gloves- powder free and silicon oven mitts-heat resistant</p> 			<p>Used to hold hot pots</p> <p>Wear disposable gloves during preparation and handling of food to protect possible germs transfer (cross contamination).</p>
<p>Safety shoes</p> 	<p>Flat, closed, non slippery sole shoes to protect one from slipping, hot water and sharp objects.</p>		<p>Allows for maximum comfort and are ideal for people who are on their feet all day.</p>

h. Safety Equipment

Item Description	Item Specification	Item Picture	Usage and Tips
 Fire extinguisher	4kg SABS approved		When a fire breaks out use a fire extinguisher. NB: Volunteer Food Handler should be trained on firefighting and prevention.
First aid kit 	Each kit includes a variety of bandages, compresses, tablets, eye care and burn relief products		A Kit is well equipped to handle the burns and other minor injuries common to Food Handlers.

i. Miscellaneous

- Detergent for dish washing - Concentrated dishwashing liquid. The liquid soap must be lathering and without any strong smell.
- Disinfectant for the kitchen - Concentrated Ammonia; Cleaner; General purpose cleaner; Oven cleaner; Gas Burner Cleaner; Abrasive powder cleaner for hard surfaces, sinks, walls, etc.
- An Antibacterial hand soap.
- Dish towels, swaps and Hand paper towel rolls.
- Plastic/Refuse bags.
- Pest Control Chemicals for cockroaches stored in lockable containers.

NB: All products must be SABS approved and specifically for food industry.

PART C: ANNEXURES

EQUIPMENT NEEDS ANALYSIS

This table could assist schools to determine what is required and at what cost before procuring.

Item	Name of equipment/utensil	Quantity available	Quantity required	Unit price	Total Cost
1. Food storage equipment	Stainless steel food storage shelves				
	Food box storage container with lid				
	Ingredient bin heavy duty with lids and mobile dolly				
2. Pre-Preparation equipment	Stainless steel work table				
	Industrial Platform Scale				
	Industrial food processor				
	Measuring jug				
	Measuring cups				
	Industrial Can Opener				
	Polypropylene plastic cutting boards				
	Cooks' knives – one standard size for schools				
	Large cooking spoons (pap stirrer)				
	Basting spoon				
Grater					
3. Cooking equipment & Utensils	3 plate gas burner				
	Gas cylinders 48kg x 2 stored in a steel cages				
	Stainless steel and Aluminium Cooking pots with lids				
4. Serving equipment	Stainless steel food trolley				
	Stainless steel gastronorms (containers) with lids and Chafing dishes, ethanol fuel gel refill and fuel holder.				
	Stainless steel ladles - 125ml & 250ml				

Item	Name of equipment/ utensil	Quantity available	Quantity required	Unit price	Total Cost
5. Eating Crockery and Cutlery	Dinner Plate; bowls and cups-stainless steel or polypropylene plastics				
	Standard table spoon, table fork and table spoon- stainless steel				
6. Cleaning equipment	Bucket				
	Mop & Broom				
	Waste bin or Recycling waste bin				
7. Protective clothing	Apron and Head gear/cap				
	Oven gloves/ mitts – heat resistant				
	Safety shoes				
8. Safety equipment	Fire extinguisher				
	First aid kit				
9. Miscellaneous	Detergent for dish washing				
	An Antibacterial hand soap				
	Disinfectant for the kitchen				
	Plastic/refuse bags				
	Dish towels and swabs				





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