

Microwave Cooking Feature

EDUCatering Magazine – February 2014

Please attribute any comments to Ray Hall, Managing Director, RH Hall

- **What sort of foods and dishes can be prepared in a microwave?**

Today's microwave ovens are sophisticated, yet easy to use and produce excellent cooking results in a fraction of the time it takes to cook foods conventionally and their versatility is under estimated. Many foods and dishes can be cooked very, very well in a microwave oven: cakes, sauces, meat, fish, vegetables, fruit, pasta, rice, eggs and jams can all be cooked with great results – you can even roast a chicken in one, but you won't get a crispy, brown skin! However, a duck will cook well because of the amount of fat naturally found under the skin of the meat.

Meat and pastry products are often better cooked conventionally then re-heated in a microwave oven, but with the versatile combination microwave ovens available, these types of foods can be cooked with microwave technology with excellent results.

Microwave cooking uses the moisture found in the food itself.

- **Are school caterers good at getting full use out of their microwave?**

I don't believe so – understanding is still the key to success with microwave cooking. To maximise usage of a microwave effectively, I think it is paramount that all cooks / caterers are educated as to the full potential of their unit and also be receptive to implementing the alternative cooking techniques required and then they'll be able to fully appreciate the great results that are possible and implement its use more and more in the meals produced by their kitchen.

By fully understanding their microwave and getting the right techniques for each type of food, succulent meat, poultry and fish together with perfectly cooked vegetables that retain taste, texture and nutritive value are all possible. Many of the techniques used in microwave cooking are the same as used in conventional cooking, but with a few minor adjustments.

There is a great deal of diversity of dishes that can be prepared quickly and easily from fresh ingredients. Not only that, but more nutrients are retained in microwave cooked food than by any other cooking method. In fact, correctly cooked vegetables contain 85% of their original vitamin content, when boiled they often contain none! A great benefit especially for growing children where they would only need to eat a little to get more of the vitamins they need.



Historically there has been a lot of negativity towards cooking with microwaves, but there shouldn't be, microwaves can cook great food in a fraction of the time it would take with other methods. Not only do they save time, but money and nutrients too.

Some schools are using their microwaves to the maximum if they have gone down the plated meal route for example – that is using ready plated meals solutions regenerated through a system that uses microwave technology such as the *iWave*®. This route is a very effective way of turning round complete meals in a short service period and a very viable option for schools especially where kitchen space may be a limiting factor – especially in light of the provision of school meals to all KS1 pupils from September of this year and where additional resource and equipment will be required. It's a system that relies on utilising microwave technology to the full.

- **Can microwaves complement a wider range of cooking equipment in the school kitchen?**

Yes, microwaves can complement a wider range of cooking equipment. They can be used to cook certain elements of a menu quickly whilst other components of a dish are prepared and cooked conventionally. They can also provide good back up for all reheating / defrosting needs and producing food on demand.

- **What top tips do you have for school caterers thinking about using their microwave more?**

Whilst it is common for caterers to choose speed (the higher the output the faster reheat times), it is also very important to understand that for some food products too much speed will destroy smaller portions of food or the delicate and sugary types of products. The higher output models (above 1900 watt) are designed for the reheating of larger portions of food and as the oven cavity sizes are much larger than the regular commercial microwave the requirement of more microwave output is vital to aid more even cook/reheat result.

Overcooking is one of the common problems experienced when new to microwave cooking or introducing new dishes. It is better to undercook first until you are familiar with a recipe, test it and then increase the cooking time. You should also factor in standing time and test a dish after this – a bit of trial and error will help establish the correct timing for a perfect result. You can always put it back in the oven for an extra minute – whereas overheated or overcooked food is ruined.

Consider each of the foods you are cooking – every food has a different moisture, fat and sugar content and different starting temperatures – e.g. refrigerated, ambient etc. and these factors all affect cooking times and can affect the final result.

If unsure, always start with a recipe you are familiar with – if you have cooked it before you will know exactly what the finished dish should look and taste like, so you can then compare and tweak the cooking procedure to get the same result.

Cont'd ...

When using your microwave on a regular basis, one tip that shouldn't be overlooked for getting the best from a microwave is regular cleaning - keep the oven's cavity and inner door clean of food spillage / deposits at all times. This will avoid cavity burn ups and prolong the life of its heart "The Magnetron". This measure will also help the consistency and speed of reheat/ cook times.



You could purchase the **Cavity Protection System** which is a unique and simple plastic cavity liner which is safer to use, easier to clean and provides long term financial benefits. This invaluable accessory is exclusive to Sharp commercial microwave ovens. Every Sharp sold with the **CPS** comes with a lifetime warranty on the cavity.

As a final note, I think school caterers should seriously look at the **iWave**[®] plated meal solution is they would like to use microwave cooking more in their operation. The ability to implement this meal system into a school is extremely straight forward and cost effective and we have lots of food to plate offerings to suit school requirements.

- **Please include any other comments that you feel our readers will be interested in.**

What to consider when choosing a microwave...

If a caterer is looking to invest in new microwaves, they should look at a microwave with variable power, as this will allow more dense food products to be reheated/cooked slower allowing for the conduction of heat to work through to the middle to avoid an overcooked outside and raw centre! The use of variable power works in the same way as your hob and gives you the exact control you need to create speed yet a quality cooked/reheat result.

A further feature to look for is stage cooking. This allows an operator to program in a series of different defrost /cook / reheat tasks to allow a complete process to be carried out at the press of a button. For example, it is possible to defrost then cook and keep warm ready for serve up all in one go. Most leading brand models now have this function as standard.

Consider a combination microwave...

Depending on the use of the microwave and the dishes/menu offered, a combination microwave oven may be a good addition – it is likely that most caterers have a need for reheat, defrost and cooking tasks and in this case, it is recommended that both a combination microwave oven and a microwave oven be both purchased. A combination microwave oven will not replace the need for microwave oven and vice versa. These two types of oven work extremely well in tandem together. For example, whilst reheating /cooking pastry products using the combination model the ordinary microwave is available for all your straightforward reheat/defrost requirements. The features available today allow a choice of manual and programmable models and some even allow the chef to enter the detailed names of individual dishes and daily/weekly specials (as with the Maestrowave Combi Chef 7). As the name suggests, the Combi Chef 7 is able to operate in a variety and combination of modes making it the most flexible, efficient and easy to use oven yet! If the chef wants to bake, roast, grill, steam, defrost, regenerate, microwave, boil or simply keep food warm this is the oven that can do it all.



Alternative applications...

The revolutionary *iWave*® Plated Meals System

Meal delivery can be dramatically improved whilst cutting food wastage and energy costs with the unique, fully automated *iWave*® 'straight to plate' foodservice solution. Suitable for chilled, frozen and ambient foods, it's very economical to run with an eco-friendly carbon footprint, providing a saving of up to 70% over conventional foodservice methods.

With this system, school catering operations are able to provide children with a choice of good quality, nutritious hot meals that can be served within five minutes of selection.

The *iWave*® is extremely easy to use - manual controls have been replaced with a "fool-proof" barcode scanner and unique encrypted barcodes on dishes, with any chance of operator error being removed; every meal is delivered on demand, on time and at its best, every time. And because the food is not handled, it creates a very hygienic operation. Any foodservice volume demand can be accommodated.

The *iWave*® system also features a stock control system and this can replace much of the manual intervention currently required to re-order stock. The added benefits of waste and stock loss reporting will give management early warning of slow moving lines and potential misappropriation of stock.

Every time one of the unique *iWave*® barcodes are scanned, the identity of the food or user is recognised and logged by the system. The information is sent to the *iWave*® server via a wired, GPRS or wireless connection. Alternatively information can be stored on the *iWave*® and downloaded directly to a laptop or PDA with an infra-red or Bluetooth connection.

The use of the full e-reporting capabilities of the *iWave*® are optional. The system will work as a simple scan and cook unit if preferred. Other reporting needs can also be provided for on a bespoke basis.

iWave® System highlights:

- **Suitable for fresh, frozen and ambient food products**
- **100% error proof with consistent and safe food regeneration**
- **Menus can be created to meet any dietary or nutritional values. RH Hall has worked with a number of specialist plated meals suppliers with the *iWave*® system**
- **Operates off a standard 13 amp plug, small footprint ideal for restricted space**
- **Fully mobile to create a flexible and versatile system – can be**
- **Very economical to run with an eco-friendly carbon footprint providing a saving of up to 70% over conventional food service regeneration**
- **Up to 50% capital cost saving compared to traditional regeneration equipment**
- **Full management reporting, automated stock control, HACCP**
- **Ability to fix the required food margin and control budgets**

Catering vending...

A great example of a new innovative product developed through working with our vending clients is the **iWave Feedstation**. Produced by the RH Hall UK factory, this new solution has been incredibly well received by clients such as ISS and Sodexo and was showcased at AVEX and the Lockhart Conference. Combining the ultimate accelerated regeneration system, the iWave® with interactive live digital marketing and touch screen displays into a merchandising unit that can host real time promotions, hot food can be provided 24 hours a day 365 days a year.

This solution could be particularly relevant for older students/children, where they simply make their choice from the digital display, obtain their pre-packaged meal, then scan the barcode on the packaging and place the item inside the iWave® to begin the cooking process. It's totally fool-proof and eliminates any need for staff supervision. The system can be built up and programmed as required then added to at any time to cater for all foodservice demands.

- **Please include a definitive website address where readers can go for more info on your company**

www.rhhall.com

www.microwaveassociation.org.uk

www.maestrowave.com



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