

 <b>한국소비자원</b> Korea Consumer Agency		<h1>Press Release</h1> <p>"An agency for the citizens in interest of consumers"</p>		 <a href="#">Facebook @kcanews</a>
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<b>Embargoed until <span style="color: red;">Wednesday, October 21 morning edition.</span></b> <b>[Tuesday, October 20 at 12:00 for broadcasting and internet media]</b>				
Release	Monday, October 19 2020 (16 pages)	Department	Machinery & Metallic Materials Team, Department of Test & Inspection	
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## Mini Electric Rice Cookers show different performance (Taste/Rice cooking) after Keeping Warm

Comparisons on price and quality of mini electric rice cookers to be provided to consumers on "Compare & Sympathize" page at "Happy Dream (www.consumer.go.kr)."

Thanks to the rising number of single households, interest and sales of mini electric rice cookers are increasing. Still, more information is required on their quality and safety.

To this end, Korea Consumer Agency (KCA, President Lee Hee-sook) tested and evaluated safety, rice cooking time, quality of taste and others of 9 mini electric rice cookers\* manufactured by 7 companies to provide objective information for consumers when selecting products.

- \* Daewoo Appliance (DEC-CM3500), Daewoong (DRC-0608), Shinil Electronics (SCJ-PBP10WH), Cuckoo Electronics (CRP-EHS0320FW, CR-0365FR), Cuchen (CJH-PA0421 SK, CJE-CD0301), Kitchen Art (KAEC-A350HLS), Poongnyun (MPCKA-03M(B))

Test results showed that while all products showed good taste right after cooking, there were differences in rice cooking time, taste after keeping warm for 12 hours, annual electricity bill and others. In addition, all products met relevant requirements\*\* on safety (elution of harmful substances from inner pot, electric shock protection, Etc.).

\* Evaluation conducted by 26 experts (Korea Food Research Institute) trained on assessing eating quality of cooked rice to review sensual quality of cooked rice

\*\* 「Food Sanitation Act」, 「Electrical Appliances and Consumer Products Safety Control Act」, 「Radio Waves Act」

□ **Rice tasted differently per product after kept warm**

- The steamed rice of all products tasted relatively “good” right after it was cooked. When kept warm for 12 hours, 7 products showed “good” taste, while CR-0365FR of Cuckoo tasted “average.” DRC-0608 of Daewoong was considered inappropriate for keeping rice warm, as the rim of steamed rice significantly hardened.
- \* Daewoo Appliance (DEC-CM3500), Shinil Electronics (SCJ-PBP10WH), Cuckoo Electronics (CRP-EHS0320FW), Cuchen (CJH-PA0421SK, CJE-CD0301), Kitchen Art (KAEC-A350HLS), Poongnyun (MPCKA-03M(B))

[ Evaluation on Taste of Steamed Rice ]

Type	Manufacturer	Model	Right after cooking	After kept for 12 hours
IH High-pressure rice cooker	Cuckoo Electronics	CRP-EHS0320FW	★★★	★★
	Cuchen	CJH-PA0421SK	★★★	★★
Hotplate Non-pressure rice cooker	Daewoo Appliance	DEC-CM3500	★★★	★★
	Daewoong	DRC-0608	★★★	△
	Shinil Electronics	SCJ-PBP10WH	★★★	★★
	Cuckoo Electronics	CR-0365FR	★★★	★
	Cuchen	CJE-CD0301	★★★	★★
	Kitchen Art	KAEC-A350HLS	★★★	★★
	Poongnyun	MPCKA-03M(B)	★★★	★★

★★★ : Relatively good   ★★ : Good   ★ : Average  
 △ : While this model features “Keep Warm” function, it is not suitable for warming steamed rice, as the rim of the rice significantly hardens.

### [Types of Electric Rice Cooker]

IH High-pressure rice cooker	Hotplate Non-pressure rice cooker
<p>Converts electric resistance of inner pot to heat by pressurization and electromagnetic induction. Relatively expensive due to various safety devices and complex structure.</p>	<p>Hotplate on the bottom of the pot is heated without pressurization. Relatively cheap thanks to simple structure.</p>

#### □ Differences in taste according to rice-cooking methods

- The hotplate non-pressure rice cooker is relatively cheap, and heats the bottom of inner pot. This allows steamed rice relatively soft and well-done. The relatively expensive IH high-pressure rice cooker steams rice at high temperature, and offers hard and tacky taste.
- In terms of the color of cooked rice, IH pressure rice cooker showed relatively yellower rice compared to that of hotplate non-pressure rice cooker.

#### □ IH pressure rice cooker cooked shorter, while hotplate non-pressure rice cooker was cheaper

- When rice was cooked at maximum capacity (portion) in accordance with user manuals\*, IH pressure rice cooker (25, 30 minutes) took relatively shorter time than hotplate non-pressure rice cooker (40 to 75 minutes).

\* Rice cooking method applied to evaluation on taste of steamed rice

- In terms of price, hotplate non-pressure rice cookers (average KRW 43,000) were cheaper than IH pressure rice cookers (average 221,000). Those which featured power down and many other functions were relatively more expensive among hotplate non-pressure rice cookers.

**[ Rice cooking time, various functions and prices ]**

Type	Manufacturer	Model	Total cooking time [Min.]	Power Down *	Functions	Purchase price** [KRW]
IH High-pressure rice cooker	Cuckoo Electronics	CRP-EHS0320FW	25	√	ⒶⒷⒸⒹⒺⒻⒼⒽ ⒾⓀⓂⓃ	219,030
	Cuchen	CJH-PA0421SK	30	√	ⒶⒷⒸⒹⒺⒻⒼⒽ ⒾⓀⓂⓃ	222,900
Hotplate Non-pressure rice cooker	Daewoo Appliance	DEC-CM3500	50	-	-	21,530
	Daewoong	DRC-0608	71	-	-	24,900
	Shinil Electronics	SCJ-PBP10WH	70	√	ⒶⒻⒼⒽⒾⓀ	54,060
	Cuckoo Electronics	CR-0365FR	40	√	ⒶⒷⒸⒹⒺⒻⒼⒽⒾⓀ ⓀⓂ	58,230
	Cuchen	CJE-CD0301	45	√	ⒶⒷⒻⒼⒽⓀⓂ	64,650
	Kitchen Art	KAEC-A350HLS	58	-	-	25,660
	Poongnyun	MPCKA-03M(B)	75	√	ⒻⒼⒽⒾⓀⓀ	53,970

\* When there is no power down function and the power cord is not unplugged, the cooker continues to keep rice warm, leading to higher electricity bill.

\*\* Purchase price from online shopping mall as of Mar. 2020. Prices may vary according to purchasing place and point.

√ : Featured    - : Not featured

ⒶTimed cooking ⒷAuto cleaning (Removes foreign matter and odor by cleaning steam outlet, Etc.)

ⒸSleep mode, voice guidance

ⒹReheat, Temperature control while kept warm, Taste control, Voltage Sage Protection (VSP)

ⒺLock buttons, Easy steeping ⒻDisplay remaining cooking time

ⒼAuto cleaning & packing replacement alarm, Frozen rice ⒽMulti-grain ⒾSteamed cooking

ⓀPorridge ⓀQuick white rice cooking, Brown rice ⓂBaby food

ⓀDeluxe rice, Germinated brown rice, High power ⓃScorched rice (Harder scorch)

**□ Annual energy cost up to 1.8 times different per product**

- Comparisons were made on annual energy cost (electricity bill) when the product was used. As a result, Cuchen (CJH-PA0421SK) was charged at KRW 13,000, while Kitchen Art (KAEC-A350HLS) was charged at KRW 24,000, showing up to 1.8 times of difference.

\* Electricity bill occurred after using 438 times (Once: 300g of rice cooked and kept warm for 6 hours) in accordance with 「Regulation on Energy Efficiency Labeling & Standards」

□ **3 products violated labeling standards for energy consumption efficiency level**

○ Electric rice cookers shall be labelled with energy consumption efficiency level in accordance with relevant law. However, Daewoo Appliance (DEC-CM3500), Daewoong (DRC-0608), and Kitchen Art (KAEC-A350HLS) failed to change and attach their new level (Level 4 → 5) changed as of Apr. 1, 2018, and violated mandatory labelling requirements.

\* According to the 「Energy Use Rationalization Act」, rice cookers are mandated to attach energy consumption efficiency level label which includes information on one-time cooking and warming power consumption, energy consumption efficiency level, Etc.

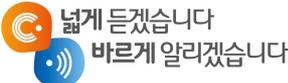
\*\* All 3 manufacturers replied that they will improve labels.

□ **All products met safety requirements**

○ Based on safety test results including elution of harmful substances from inner pot, pressure/electricity/magnetic field, Etc., all products met relevant standards. In addition, no abnormality was found from inner pots which underwent wear-resistance test which repeats friction.

\* Standards and specifications of utensils, containers and packaging (Food Sanitation Act), Safety standard on electrical appliances (Electrical Appliances and Consumer Products Safety Control Act), Public notification of conformity assessment for broadcasting communications equipment (Radio Waves Act)

KCA plans to continuously provide comparison on safety and quality of products used frequently in our daily lives to support consumers consume reasonably.

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