

# New Instrument for Routine Evaluation of Anti-oxidant Activity of Various Foods

The ROS (reactive oxygen species) such as  $O_2^{\cdot -}$ ,  $HO^{\cdot}$ ,  $^1O_2$  and  $NO$  are known to be the origin of many diseases and some methods for evaluating anti-oxidative activity have been developed so far. ESR is a unique method to detect free radicals directly and thus it is the most useful and reliable one. Here JEOL developed a new ESR equipped with auto-tunable microwave bridge. Preparing some useful dedicated functions such as sensitivity correction and reproducibility enhancement, reliable results can be obtained even by the beginners. This instrument can work as the evaluation tool for the food-irradiation by installing another software.

*New!*

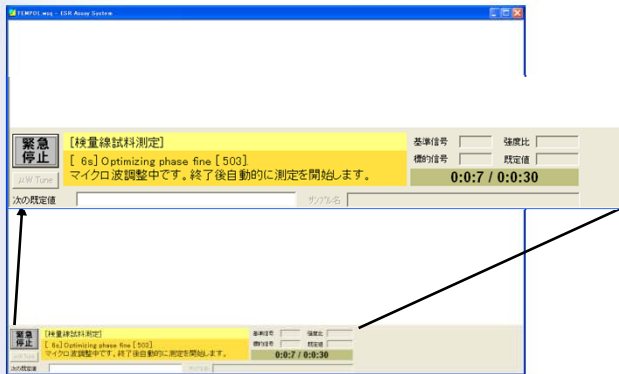


Fig.1 Autotuning of microwave bridge  
It is no need to check Q-Dip. The measurement starts automatically when the bridge is adjusted.



Fig.2 The measurement starts automatically when the bridge is adjusted.



Fig.4 Superoxide anion radical (DMPO- $O_2^{\cdot -}$ )

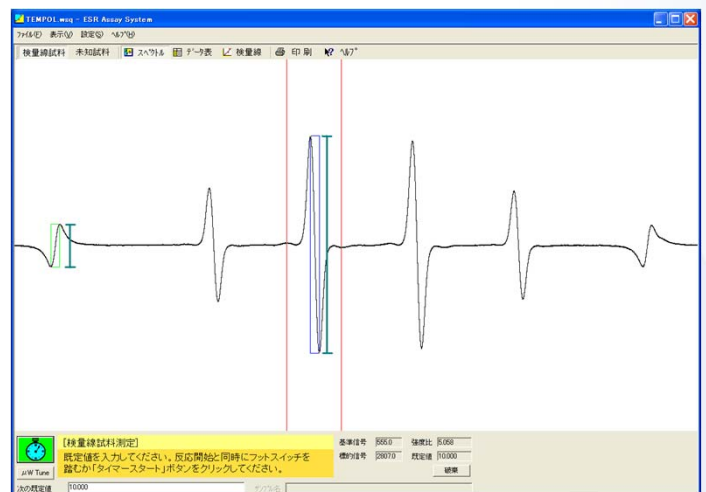


Fig.3 Hydroxyl radical (DMPO-OH)  
Signal intensity is automatically determined when the measurement is completed.

**For quick evaluation and screening of anti-oxidant activity of various foods!  
Evaluation of food-irradiation is possible by using another software.**

● For inquiries, contact: AI Sales Promotion Group  
Application Group for ESR

TEL:+81-42-528-3340

TEL:+81-42-542-2241

URL <http://www.jeol.co.jp/>

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