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APPLICATION OF GARDENIA JASMINOIDES ELLIS EXTRACT IN REDUCING RANCIDITY OF SAUCED DUCK.

(57)

This invention belongs to the technical field of food technology and relates to an application of Gardenia jasminoides Ellis extract to reduce rancidity of sauced duck. This application includes the following steps. Step 1, preparation of Gardenia jasminoides Ellis extract. Step 2, the fresh duck is smeared and roast for three times. Step 3, the duck is pre-boiled and washed after drying. Step 4, the duck is boiled and stewed in the marinade, which mixed with Gardenia jasminoides Ellis extract, and then stored. This application can effectively reduce the rancidity of the sauced duck and improve the color quality.

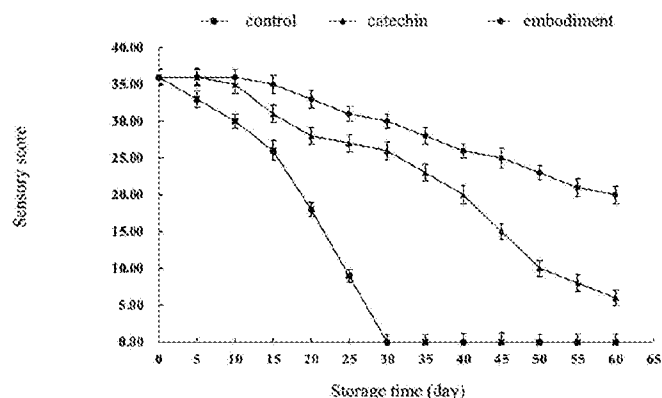


FIG. 1

DESCRIPTION

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**APPLICATION OF GARDENIA JASMINOIDES ELLIS EXTRACT IN REDUCING
RANCIDITY OF SAUCED DUCK****FIELD OF THE INVENTION**

The present invention relates to the technical field of food technology, and in particular, to an application of Gardenia jasminoides Ellis extract in reducing rancidity of sauced duck.

BACKGROUND OF THE INVENTION

Sauced duck is a specialty food in Jiangsu and Zhejiang provinces of China. It obtains its name because of the yellow and black color, and has the characteristics of umami, fragrance, crispness and tenderness. Because of its high content of protein, fatty and moisture, the sauced duck is easy to occur the rancidity phenomenon which will decrease its quality, through the influence of light, temperature and humidity.

Gardenia jasminoides Ellis is the fruit of Gardenia jasminoides (Rubiaceae), which is a traditional edible and medicinal resource in China. Many researches show that the Gardenia jasminoides Ellis has a variety of biological active components, including gardenoside, gardenitin and chlorogenic acid. Currently, the Gardenia jasminoides Ellis is widely used in the clinical treatment application, such as liver protection, blood pressure depressing, sedative, hemostasis and detumescence.

SUMMARY OF THE INVENTION

In order to overcome the above-mentioned shortcomings and drawbacks, the present invention provides an application of Gardenia jasminoides Ellis extract in reducing rancidity of sauced duck. This application can effectively reduce the rancidity of the sauced duck and improve the color quality.

In order to achieve the above purpose, the invention provides a technical method as follows:

An application of Gardenia jasminoides Ellis extract in reducing rancidity of sauced duck, comprising the following steps:

step 1, the Gardenia jasminoides Ellis is crushed to obtain the Gardenia jasminoides Ellis powder;

step 2, the Gardenia jasminoides Ellis powder is put into pure water and heated for 5 hours in the temperature of 60-95°C to obtain a concentrated solution; the first concentrated solution is filtered by diatomite to obtain a first filtrate;

step 3, the first filtrate is concentrated to 10-30% of its original volume to obtain a Gardenia jasminoides Ellis extract;

step 4, fresh duck is smeared with 2% of salt and 0.5-2% of Gardenia jasminoides Ellis extract, then

roasted in oven for 100 min in the temperature of 30-90℃ for three time to obtain a first salted duck;

step 5, the first salted duck is placed in the constant temperature and humidity equipment for 10-24 hours to obtain the drying duck, with temperature of 2-10℃ and humidity of 20-50%;

step 6, the drying duck is pre-boiled and washed by the pure water for 12-50 min to obtain a second salted duck;

step 7, 100 kg of pure water is mixed with 2-6 kg of soy sauce, 1-4 kg of sucrose, 2-5 kg of cooking wine, 1-5 kg of ginger, 0.5-4 kg of salt and 0.5-1 kg of caramel color, and then simmered for 60 min to obtain a marinade; the second salted duck is added to the marinade mixed with 1-5 kg of Gardenia jasminoides Ellis extract, and boiled for 20-80 min and stewed for 10-50 min; after cooling, the boiled and stewed duck is stored in the constant temperature and humidity equipment to obtain the sauced duck, with temperature of 2-10℃ and humidity of 20-40%.

The invention has the following advantages and beneficial effects:

Compared with existing technologies, the application provided by the present invention has following significant advantages and improvements:

1. The invention provides a method for extracting and purifying the effective substances of Gardenia jasminoides Ellis, and accordingly, the Gardenia jasminoides Ellis extract obtained by using the method can achieve the effect of reducing rancidity of sauced duck.
2. Compared with the commonly used antioxidant, such as catechin, to reduce rancidity in the prior technology, this method adopts natural Gardenia jasminoides Ellis as raw material, which can not only reduce rancidity, but also play a good color effect.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 shows the sensory evaluation results of the three kinds of sauced duck.

FIG. 2 shows the acid value results of the three kinds of sauced duck.

FIG. 3 shows the peroxide value results of the three kinds of sauced duck.

EMBODIMENTS OF THE INVENTION

The invention discloses an application of Gardenia jasminoides Ellis extract in reducing rancidity of sauced duck. The technical personnel in this field can refer from the contents of this invention and improve the parameter appropriately to achieve. In particular, it is noted that all similar replacements and

modifications are apparent to the technical personnel in the field and are considered included in the present invention. The application of the invention has been described by better embodiments, and the relevant personnel are obviously able to achieve and apply the invention by modifying and combining the method and application described herein without deviating from the content, spirit and scope of the invention.

In order to understand the invention better, it will be illustrated by the following embodiments.

EMBODIMENT 1

Step 1, the *Gardenia jasminoides* Ellis was crushed to obtain the *Gardenia jasminoides* Ellis powder.

Step 2, the *Gardenia jasminoides* Ellis powder was put into pure water and heated for 5 hours in the temperature of 60°C to obtain a concentrated solution 1; the concentrated solution was filtered by diatomite to obtain a first filtrate.

Step 3, the first filtrate was concentrated to 10% of its original volume to obtain a *Gardenia jasminoides* Ellis extract.

Step 4, a fresh duck was smeared with 2% of salt and 0.5% of *Gardenia jasminoides* Ellis extract, then roasted in oven for 100 min in the temperature of 30°C for three time to obtain a first salted duck.

Step 5, the first salted duck was placed in the constant temperature and humidity equipment for 10 hours to obtain a drying duck, with temperature of 2°C and humidity of 20%.

Step 6, the drying duck was pre-boiled and washed by the pure water for 12 min to obtain a second salted duck.

Step 7, 100 kg of pure water was mixed with 2 kg of soy sauce, 1 kg of sucrose, 2 kg of cooking wine, 1 kg of ginger, 0.5 kg of salt and 0.5 kg of caramel color, and then simmered for 60 min to obtain a marinade; the second salted duck was added to the marinade mixed with 1-5 kg of *Gardenia jasminoides* Ellis extract, and boiled for 20 min and stewed for 10 min; after cooling, the boiled and stewed duck was stored in the constant temperature and humidity equipment to obtain the sauced duck 1, with temperature of 2°C and humidity of 20%.

EMBODIMENT 2

Step 1, the *Gardenia jasminoides* Ellis was crushed in order to obtain the *Gardenia jasminoides* Ellis powder.

Step 2, the *Gardenia jasminoides* Ellis powder was put into the pure water and heated for 5 hours in the temperature of 95°C to obtain the concentrated solution; the concentrated solution was filtered by diatomite to obtain a first filtrate.

Step 3, the first filtrate was concentrated to 30% of its original volume to obtain the *Gardenia jasminoides* Ellis extract.

Step 4, the fresh duck was smeared with 2% of salt and 2% of *Gardenia jasminoides* Ellis extract, then roasted in oven for 100 min in the temperature of 90°C for three time to obtain a first salted duck.

Step 5, the first salted duck was placed in the constant temperature and humidity equipment for 24 hours to obtain the drying duck, with temperature of 10°C and humidity of 50%.

Step 6, the drying duck was pre-boiled and washed by the pure water for 50 min to obtain a second salted duck .

Step 7, 100 kg of pure water was mixed with 6 kg of soy sauce, 4 kg of sucrose, 5 kg of cooking wine, 5 kg of ginger, 4 kg of salt and 1 kg of caramel color, and then simmered for 60 min to obtain a marinade; the second salted duck was added to the marinade mixed with 1-5 kg of *Gardenia jasminoides* Ellis extract, and boiled for 80 min and stewed for 50 min; after cooling, the boiled and stewed duck was stored in the constant temperature and humidity equipment to obtain the sauced duck 2, with temperature of 10°C and humidity of 40%.

EMBODIMENT 3

Step 1, based on embodiment 2, steps 1 to 3 were removed, and the *Gardenia jasminoides* Ellis extract of steps 4 to 7 were replaced with pure water to prepare the control sauced duck.

Step 2, based on the embodiment 2, steps 1 to 3 were removed, and the *Gardenia jasminoides* Ellis extract of steps 4 to 7 were replaced with 0.2% of catechin to prepare the catechin sauced duck.

Step 3, 10 trained sensory assessors were random selected and asked to evaluate the sauced duck 2, control sauced duck and catechin sauced duck, separately.

Step 4, the acid values of sauced duck 2, control sauced duck and catechin sauced duck were determined.

Step 5, the peroxide values of sauced duck 2, control sauced duck and catechin sauced duck were determined.

The sensory evaluation results, acid value results and peroxide results of the three kinds of sauced duck were shown in FIG. 1 to FIG. 3, respectively. After stored for 60 days, the sauced duck 2 which obtained

from this application had the best results in the three determinations. The above results showed that the application method of the present invention could reduce the rancidity of the sauced duck, improve the color of the sauced duck and improve its sensory quality. LU102705

The aforementioned embodiments are only three specific embodiments of the present invention. It should be pointed out that, without deviating from the principle of the invention, the ordinary technicians in the technical field can make some improvements and retouches. And these improvements and retouches shall also be regarded as the protection scope of the present invention.

Claims

1. An application of Gardenia jasminoides Ellis extract in reducing rancidity of sauced duck, comprising the following steps:

step 1, the Gardenia jasminoides Ellis is crushed to obtain the Gardenia jasminoides Ellis powder;

step 2, the Gardenia jasminoides Ellis powder is put into pure water and heated for 5 hours in the temperature of 60-95°C to obtain a concentrated solution; the first concentrated solution is filtered by diatomite to obtain a first filtrate;

step 3, the first filtrate is concentrated to 10-30% of its original volume to obtain a Gardenia jasminoides Ellis extract;

step 4, a fresh duck is smeared with 2% of salt and 0.5-2% of Gardenia jasminoides Ellis extract, then roasted in oven for 100 min in the temperature of 30-90°C for three time to obtain a first salted duck;

step 5, the first salted duck is placed in the constant temperature and humidity equipment for 10-24 hours to obtain a drying duck, with temperature of 2-10°C and humidity of 20-50%;

step 6, the drying duck is pre-boiled and washed by the pure water for 12-50 min to obtain a second salted duck;

step 7, 100 kg of pure water is mixed with 2-6 kg of soy sauce, 1-4 kg of sucrose, 2-5 kg of cooking wine, 1-5 kg of ginger, 0.5-4 kg of salt and 0.5-1 kg of caramel color, and then boiled for 60 min to obtain a marinade; the second salted duck is added to the marinade mixed with 1-5 kg of Gardenia jasminoides Ellis extract, and boiled for 20-80 min and stewed for 10-50 min; after cooling, the boiled and stewed duck is stored in the constant temperature and humidity equipment to obtain the sauced duck, with temperature of 2-10°C and humidity of 20-40%.

1. Une application de l'extrait de Gardenia jasminoides Ellis pour réduire le rancissement du canard en sauce, comprenant les étapes suivantes :

étape 1 : le Gardenia jasminoides Ellis est écrasé pour obtenir la poudre de Gardenia jasminoides Ellis ;

étape 2 : la poudre de Gardenia jasminoides Ellis est mise dans l'eau pure et chauffée pendant 5 heures à la température de 60-95°C pour obtenir une solution concentrée ; la première solution concentrée est filtrée par de la diatomite pour obtenir un premier filtrat ;

étape 3 : le premier filtrat est concentré à 10-30% de son volume original pour obtenir un extrait de Gardenia jasminoides Ellis ;

étape 4 : un canard frais est enduit de 2% de sel et de 0.5-2% d'extrait de Gardenia jasminoides Ellis, puis grillé au four pendant 100 minutes à la température de 30-90°C par trois fois pour obtenir un canard salé une première fois ;

étape 5 : le premier canard salé est placé dans l'équipement à température et humidité constante pour 10-24 heures pour obtenir un canard en train de sécher, avec une température de 2-10°C et une humidité de 20-50%

étape 6 : le canard en train de sécher est prébouilli et lavé à l'eau pure pendant 12-50 minutes pour obtenir un canard salé une deuxième fois ;

étape 7 : 100kg d'eau pure est mélangée à 2-6kg de sauce soja, 1-4kg de sucre, 2-5kg de vin de cuisine, 1-5kg de gingembre, 0.5-4kg de sel et 0.5-1kg de colorant caramel, et ensuite bouillie pendant 60 minutes pour obtenir une marinade ; le canard salé une deuxième fois est ajouté à la marinade mélangé avec 1-5 kg extrait de Gardenia jasminoides Ellis , et bouilli pendant 20-80 minutes et mijoté pendant 10-50 minutes ; après refroidissement, le canard bouilli et mariné est entreposé dans l' l'équipement à température et humidité constante pour obtenir le canard en sauce, avec une température de 2-10°C et une humidité de 20-40%.

Figures:

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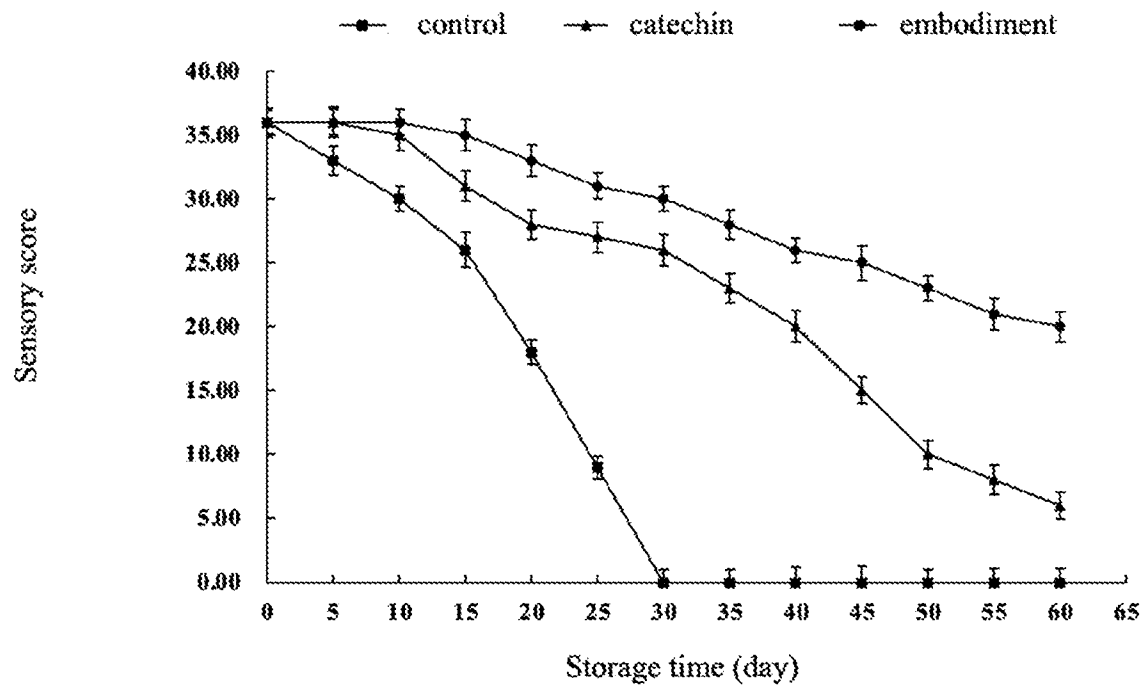


FIG. 1

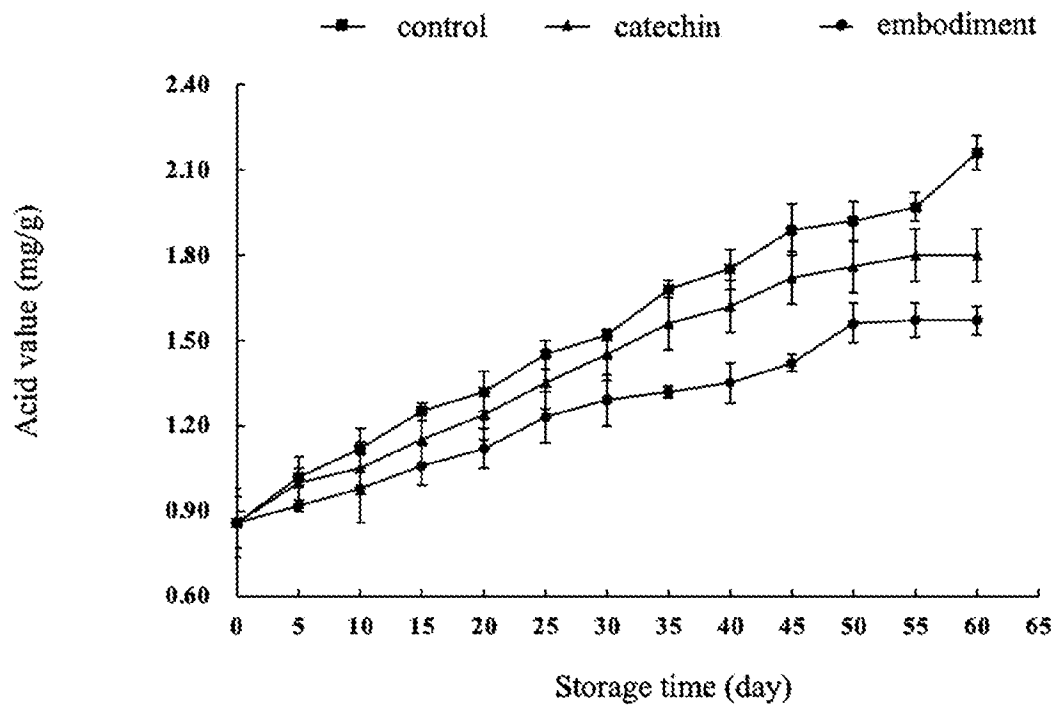


FIG. 2

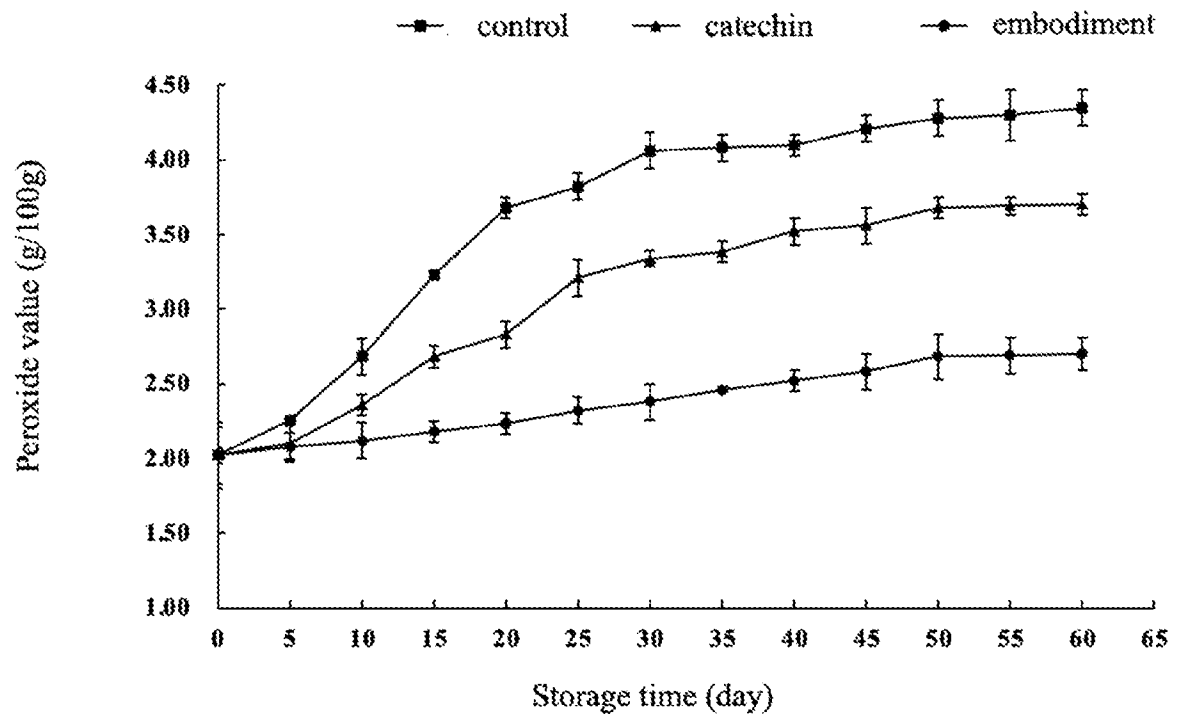


FIG. 3