CLAIMS

1. A feed of a laying hen comprising an extract solution containing ergothioneine extracted from a waste culture medium used for an edible mushroom production.

2. The feed of the laying hen according to claim 1, wherein the waste culture medium is used for either a production of a Flammulina velutipes or a Pleurotus eryngii.

3. The feed of the laying hen according to any of claims 1 and 2, wherein an alcohol solution which has ethanol of 60 to 80% and water of 40 to 20% is added to the waste culture medium, and the alcohol solution heats, and after reaching 40℃ to 60℃, an extraction can be performed for 80 to 100 minutes, the extract solution is obtained by a compression processing to separate a solid as residue from the extracted extract.

4. The feed of the laying hen according to any of claims 1 and 2, wherein water, hot water, or steam is added to the waste culture medium and the waste culture medium is heated, and a hot water extract is performed for 30 to 90 minutes after reaching 50℃ to 110℃, the extract solution is obtained by a compression processing to separate a solid as residue from the extracted extract.

5. The feed of the laying hen according to any of claims 1 to 4, wherein the residue separated the extract solution from the extract is reused as the waste culture medium for the mushroom production.

6. The feed of the laying hen according to any of claims 3 and 4, wherein the extract solution is obtained by condensing to 1/10 to 1/30 to separate and remove moisture from the extract solution by a thin film condensation processing.

7. The feed of the laying hen according to any of claims 3 and 4, wherein the extract solution is added 10 to 40% by weight ratio for a brown rice or a brown rice mixed a ground shell, is heated, and is maintained at 70 to 90℃, a fermentation processing is carried out for 44 to 52 hours, and the extract solution is obtained by condensing to 1/10 to 1/30 to remove moisture.

8. The feed of the laying hen according to any of claims 1 to 7, wherein the extract solution is mixed 4 to 20% by weight ratio for a feed of the laying hen used generally.

9. A raising method of a laying hen comprising feeding the feed according to any of claims 1 to 8 of 60 to 180g per a hen once or dividing into two to six times a day and continuously feeding from 10 days to 30 days.

10. An egg laid by a laying hen which is fed in the raising method according to claim 9, wherein the egg contains the ergothioneine.

11. An egg white and a processed food of the egg white of the egg according to claim 10, wherein the egg white contains the ergothioneine 5 to 13μg/g.

12. An egg yolk and a processed food of the egg yolk of the egg according to claim 10, wherein the egg yolk contains the ergothioneine 3 to 13μg/g.

13. An egg according to any of claims 10 to 12 comprising an egg white and an egg yolk, a radical scavenging ability per unit weight of the ergothioneine contained in the egg white is 1.4 or more times a radical scavenging ability per unit weight of the ergothioneine contained in the egg yolk.

CLAIMS

1. A manufacture method of a feed for a laying hen containing ergothioneine comprising

adding water, hot water, or steam to a waste culture medium used for an edible mushroom production and heating the waste culture medium,

performing a hot water extract for 30 to 90 minutes after reaching 50℃ to 110℃ to obtain an extract,

separating a solid as residue from the extracted extract by a compression processing to obtain an extract solution,

separating and removing moisture from the extract solution to obtain the extract solution containing the ergothioneine which is concentrated to 1/10 to 1/30, and

mixing the extract solution containing the ergothioneine of 4 to 20% by weight ratio to a compound feed.

2. The manufacture method of the feed for the laying hen containing the ergothioneine according to claim 1, wherein the edible mushroom is selected from a Flammulina velutipes, a Pleurotus eryngii and a Lentinula edodes.

3. A hen's egg comprising an egg white containing ergothioneine 5 to 13μg/g, and an egg yolk containing ergothioneine 3 to 13μg/g, and

wherein a radical scavenging ability per unit weight of the ergothioneine contained in the egg white is 1.4 or more times a radical scavenging ability per unit weight of the ergothioneine contained in the egg yolk.