affects the increase or decrease of adhesive protein in stratum corneum cells, comprising:

a collecting step of collecting stratum corneum cells using a tape stripping method,

after the collecting step, a transfer step of transferring stratum corneum cells onto a glass slide having NH_3^+ arranged on its surface, wherein the NH_3^+ forms ionic bonds together with carboxyl groups of phospholipids in the stratum corneum cells thereby improving adhesion of the stratum corneum cells to the glass slide,

after the transfer step, a cleaning step of cleaning the glass slide,

after the cleaning step, a preparation step of adding a search target ingredient to the glass slide and staining adhesive protein by an immunohistochemical staining method to prepare a screening sample,

after the preparation step, an image acquiring step of photographing an arbitrary place of the screening sample to acquire an image for analysis, and

after the image acquiring step, an evaluation step of evaluating an effect of the search target ingredient on the increase or decrease of the adhesive protein using, as an index, an area of a stained part in the image for analysis.

[0005b] In another aspect of the present disclosure, there is provided a method for preparing a stratum corneum cell sample using a tape stripping method, comprising:

a collecting step of collecting stratum corneum cells using a tape stripping method,

after the collecting step, a transfer step of transferring stratum corneum cells onto a glass slide having NH_3^+ arranged on its surface, wherein the NH_3^+ forms ionic bonds together with carboxyl groups of phospholipids in the stratum corneum cells thereby improving adhesion of the stratum corneum cells to the glass slide, and

after the transfer step, a cleaning step of cleaning the glass slide.

Technical Problem

Claims

[Claim 1]

A method for screening an ingredient that affects the increase or decrease of adhesive protein in stratum corneum cells, comprising:

a collecting step of collecting stratum corneum cells using a tape stripping method,

after the collecting step, a transfer step of transferring stratum corneum cells onto a glass slide having NH_3^+ arranged on its surface, wherein the NH_3^+ forms ionic bonds together with carboxyl groups of phospholipids in the stratum corneum cells thereby improving adhesion of the stratum corneum cells to the glass slide,

after the transfer step, a cleaning step of cleaning the glass slide,

after the cleaning step, a preparation step of adding a search target ingredient to the glass slide and staining adhesive protein by an immunohistochemical staining method to prepare a screening sample,

after the preparation step, an image acquiring step of photographing an arbitrary place of the screening sample to acquire an image for analysis, and

after the image acquiring step, an evaluation step of evaluating an effect of the search target ingredient on the increase or decrease of the adhesive protein using,

as an index, an area of a stained part in the image for analysis.

[Claim 2]

The screening method according to claim 1, wherein in the preparation step, a screening control sample is prepared without adding the search target ingredient, and

the evaluation step is a step of evaluating the search target ingredient as having an action to decrease the amount of adhesive protein when an area of a stained part of the screening sample and an area of a stained part of the screening control sample are compared with each other to find that the area of the stained part of the screening sample is smaller.

[Claim 3]

The screening method according to claim 1, wherein in the preparation step, a plurality of screening samples identical in type of the search target ingredient and different in concentration thereof is prepared, and

the evaluation step is a step of evaluating an optimum concentration in the action to decrease the amount of adhesive protein by comparing areas of stained parts of the plurality of the screening samples.

[Claim 4]

The screening method according to any one of claims 1 to 3, wherein the adhesive protein is desmoglein 1.

[Claim 5]

The screening method according to any one of claims 1 to 4, wherein the cleaning step is a step of immersing the glass slide in xylene.

[claim 6]

A method for preparing a stratum corneum cell sample using a tape stripping method, comprising:

a collecting step of collecting stratum corneum cells using a tape stripping method,

after the collecting step, a transfer step of transferring stratum corneum cells onto a glass slide having NH^{3+} arranged on its surface, wherein the NH^{3+} forms ionic bonds together with carboxyl groups of phospholipids in the stratum corneum cells thereby improving adhesion of the stratum corneum cells to the glass slide, and

after the transfer step, a cleaning step of cleaning the glass slide.