tration of the borate ester containing brake fluid, up to about a 50% concentration of the borate ester containing fluid.

In certain embodiments, a yellow color results when the colorimetric reagent is exposed to DOT3 brake fluid or a red color with exposure to DOT 4/5.1 brake fluids. If a mixture of up to 50% DOT 4/5.1 and DOT 3 is present, an orange color that varies with the concentration of DOT 4/5.1 develops. In certain embodiments, the colorimetric reagent color change can be determined with the use of a color chart or scale for reference purposes. In one embodiment, the colorimetric reagent remains a liquid in a container, such as a tube, wherein a sample of brake fluid is added. In one embodiment, it is also possible to use an electronic color tester (such as a spectraphotometer) to read the color reaction for automated determination of results, which can be assistive for those otherwise visually impaired or incapable of determining the color reaction (or small reactions).

Referring to FIG. **1**, a dip test strips **10** having colormetric reagent **12** disposed thereon are dipped into a sample of brake fluid for one second. The colormetric reagent may be any known to react with a borate ester to produce a color change. After shaking off excess fluid and waiting approximately 3 minutes, the strips dipped in DOT 3 fluid show a yellow coloration, while those dipped in DOT 4 show a red coloration. One sample of a mixture of DOT 4 with DOT 3 fluid results in a red coloration, indicating that the DOT 4 fluid is at least about 50% of the content.

Referring now to FIG. **2**, a dip test strips **10** having colormetric reagent **12** disposed thereon are dipped into a sample of brake fluid for one second. After shaking off excess fluid and waiting approximately 3 minutes, the strip dipped in DOT 3 fluid shows a yellow coloration, while that dipped in DOT 4 shows a red coloration. Up to about a 50% concentration of DOT 4 in a DOT 4/DOT 3 fluid mixture, test strips **10** display an orange color that varies in intensity according to the DOT 4 concentration. After about 50% or more of DOT 4, the color becomes red as with pure DOT 4 .

As shown in FIG. **3**, a kit **20** of the invention includes a plurality of substrates (e.g., strips **22** and/or tubes **26**) upon or within which colorimetric reagent **24** is disposed. A small sample of brake fluid **28** is dispensed from a dropper onto strip **22** or within tube **26**, which may have the colorimetric reagent **24** already disposed within or added separately. Thus, brake fluid sample **28** contacts the colorimetric reagent and may be read manually for color content or with the aid of color testing machines. For example, a strip reading spectraphotometer **30** or tube reading spectraphotometer **32** may be employed to read the resulting color and provide a reading that correlates with the presence of a borate ester containing brake fluid. Of course, the colorimetric reagent may be disposed upon or within materials that are rigid, flexible and of various styles, shapes and sizes.

While the preferred embodiments of the present invention have been illustrated in detail, it should be apparent that modifications and adaptations to those embodiments may occur to one skilled in the art without departing from the scope of the present invention.

What is claimed is:

1. A method for determining a Department of Transportation (DOT) type of brake fluid, comprising the steps of:

(a) providing a colorimetric reagent and a brake fluid sample;

(b) contacting said colorimetric reagent with said brake fluid sample, wherein said colorimetric reagent results in a first color when contacted by DOT 3 brake fluid or a second color when contacted by a DOT 4/5.1 brake fluid; and

(c) determining that the brake fluid sample is DOT 3 by observing said first color or is DOT 4/5.1 by observing said second color.

2. The method of claim **1**, wherein said reagent further results in a third color when contacted by a mixture of DOT3 and DOT 4/5.1 brake fluid and wherein the DOT 4/5.1 brake fluid comprises no more than about 50% of said mixture.

3. The method of claim **2**, wherein said third color varies with the concentration of DOT 4/5.1 brake fluid up to about a 50% concentration of said brake DOT 4/5.1 brake fluid in said mixture.

4. The method of claim **1**, wherein said colorimetric reagent is reactive to a borate ester.

5. The method of claim **1**, wherein said colorimetric reagent is affixed to a strip or dipstick.

6. The method of claim **1**, wherein step (c) comprises analyzing said colorimetric reagent in an electronic color tester.

7. A method for determining a type of brake fluid, comprising the steps of:

(a) providing a colorimetric reagent and sample of brake fluid;

(b) contacting said colorimetric reagent with said brake fluid sample, wherein said colorimetric reagent results in a first color when contacted by a brake fluid that does not contain a borate ester or a second color when contacted by a brake fluid that does contain a borate ester;

(c) determining that the brake fluid sample does not contain said borate ester by observing said first color or does contain said borate ester by observing said second color.

8. The method of claim **7**, wherein said reagent further results in a third color when contacted by a mixture of borate ester and non-borate ester containing brake fluids and wherein the borate ester containing brake fluid comprises no more than about 50% of said mixture.

9. The method of claim **8**, wherein said third color varies with the concentration of borate ester containing brake fluid up to about a 50% concentration of said borate ester containing brake fluid in said mixture.

10. The method of claim **7**, wherein said colorimetric reagent is affixed to a strip or dipstick.

11. The method of claim **7**, wherein step (c) comprises analyzing said colorimetric reagent in an electronic color tester.

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