

IDENTIFICATION OF **BOVINE, GOAT AND SHEEP INGREDIENTS** IN ANIMAL PRODUCTS USING MICROCHIP REAL-TIME PCR ANALYZER ARIADNA® ACCORDING TO SN/T 2980-2011

The identification of animal derived ingredients included in raw and processed food, feed, and animal products is very important for food safety control. Detection and identification of animal derived matter included in food and feed decrease health risks associated with the consumption of undisclosed ingredients, provide measures to prevent food fraud, ensure compliance with dietary or cultural specifications (such as vegetarian, Kosher and Halal food), and help to avoid financial losses due to recall of products. Currently, real-time PCR method is widely accepted by food safety industry and referred in industry and local standards such as **SN/T 2980-2011** *“Triple fluorescent real-time PCR detection method for Bovine, Goat and Sheep derived materials in animals products”*.



Microchip-based real-time PCR analyzer AriaDNA



Nucleic acid extraction kit

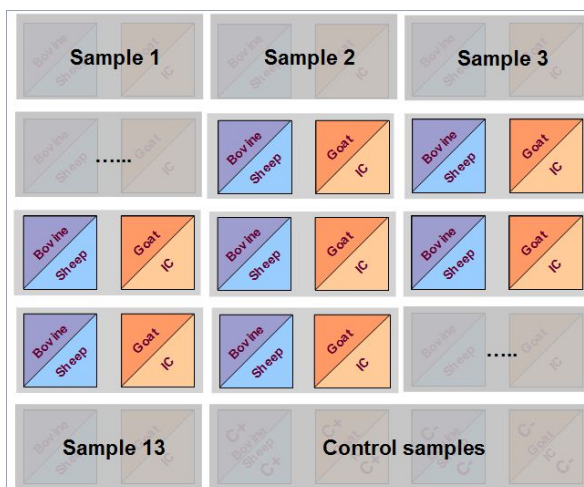


Microchip kit for identification of animal ingredients

TEST PANEL IN THE MICROCHIP KITS ACCORDING TO SN/T 2980-2011

ANIMAL INGREDIENTS (DOMESTIC ANIMAL SPECIES)

- Bovine (Cattle)
- Ovine (Sheep)
- Caprine (Goat)



Layout of microchip for analysis of **13 samples** according to **SN/T 2980-2011**. Bovine, Sheep and Goat test kits are shown along with Internal control (IC) test kit. Positive and negative control samples are included.



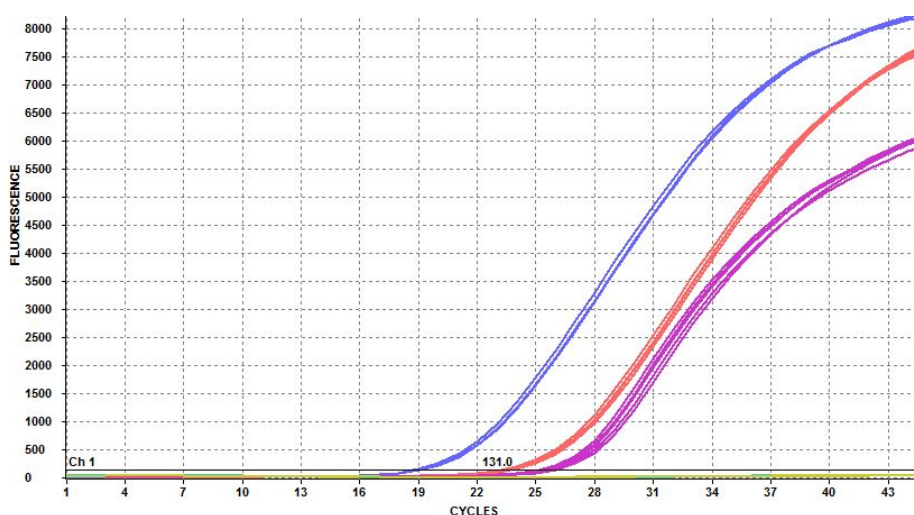
► ADVANTAGES OF THE MICROCHIP-BASED REAL-TIME PCR

- Test kits are exactly the same as recommended by Chinese Standard
- High sensitivity and specificity confirmed by Standard's application practices
- Microchips with ready-to-use lyophilized PCR mixture reduce user labor
- Rapid analysis and lower test costs
- Simultaneous analysis of **3** animal ingredients (Cattle, Sheep, Goat) in **13** samples
- Minimize human error

► ANALYSIS FLOW-CHART

1 Extract DNA from food or feed samples

2 Add DNA extracted from samples into the microchip reactors



Results of microchip real-time PCR of two raw meat samples (n=5): **Beef (pink curves)** and **Goat meat (blue curves)** against **3 Animal ID** test kits according to **SN/T 2980-2011**. Only respective test kits were positive, while the test kit for **Sheep** show negative results for both samples. Internal controls (**IC**) are also positive (**red curves**)

3 Insert the microchip into the AriaDNA[®] analyzer and run the analysis via the software on a PC

4 Obtain real-time PCR results and print report in 45 minutes

The information and specifications in this publication are subject to change without notice.

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