

Supplementary material

**Fluorescence-positioned hybridization chain reaction system for
sensitive detection of *Salmonella* in milk**

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The codes used to calculate the RGB values of the fluorescence image was shown as follows:

```
im = Image.open(filepath)

pix = im.load()

width = im.size[0]

height = im.size[1]

im1 = im.convert("YCbCr")

gd_excel.setExcelName(wordFile)

gd_excel.openExcel()

gd_excel.createTitle()

datacount = []

indexX = 1

indexY = 1

for i in range(255):

    datacount.append(0)

for x in range(width):

    for y in range(height):

        y,cb,cr = im1.getpixel((x,y))

        print y

        if y != 255:

            datacount[y] +=1
```

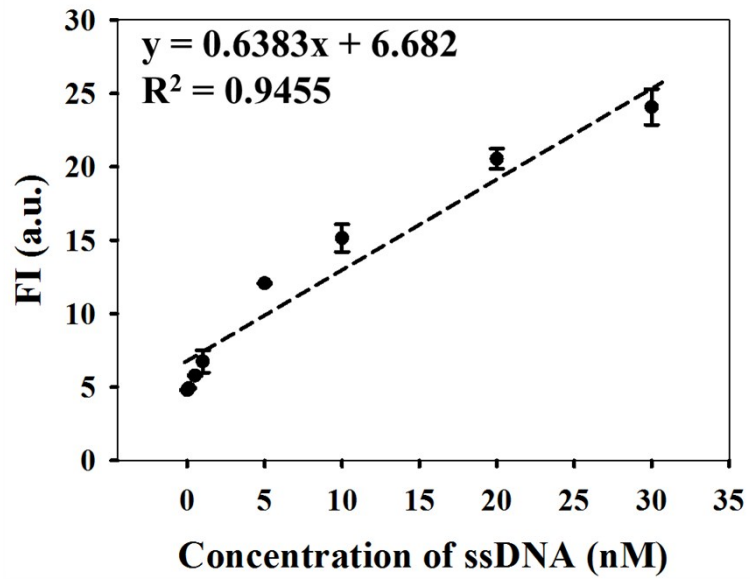


Figure S 1. Sensitivity of the proposed fluorescence-positioned HCR system for DNA detection. Error bars represent the SD of 3 replicates.