

DV200 CALCULATION FOR FFPE SAMPLES WITH TS4200

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RNA quality is a critical factor in any study of molecular biology that involves gene expression. DV200 is a key indicator of RNA integrity, especially in most degradations. Unlike the RIN (RNA Integrity Number), which can be unreliable in these conditions, the DV200 provides a more precise measurement of the quantity of RNA useful for applications such as sequencing or transcriptomics.

The DV200 sample is defined with the percentage of fragments larger than 200 nucleotides (nt) and can be calculated using a capillary electrophoresis system with the TapeStation (TS4200). This value was obtained from the analysis of the RNA fragmentation profile following the following steps:

1. Install the program: Agilent TapeStation System Software. This program can be downloaded from the Agilent website or require installation from SAU.
<https://explore.agilent.com/Software-Download-TapeStation-Systems>
2. Open the archive with the RNA quality analysis (HS RNA or RNA Screentape) facilitated by the platform with the Agilent TapeStation System Software
3. Click Region
4. Click Region Settings
5. Write 200 to the box from (nt) and 100,000 to the box from To (nt)
6. Write DV200 to the Region comment box
7. Click This File to apply this calculation to all the displays of the open archive
8. Click Apply
9. Obtain the value of the DV200 to the % of total column of the Region table of each sample

The screenshot shows the Agilent TapeStation Analysis Software interface. The 'Region Settings' dialog box is open, showing a table with the following data:

From (nt)	To (nt)	Region Comment	This File	Assay Files
200	100000	DV200	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Below the dialog box, the 'Region Table' is visible, showing the calculated DV200 values for each sample:

From [nt]	To [nt]	Conc. (ng/ul)	% of Total	Region Comment	Color
200	100000	21.5	5421	DV200	Orange

Annotations on the screenshot indicate the following steps:

1. Click Region
2. Click Region Settings
3. Click, and enter region borders
4. Apply to the active file, or to all files