http://people.csail.mit.edu/jaffer/Marbling/pst-marble-commands-v1.4.pdf

PST-marble Commands and Parameters

Colors

RGB colors can be specified in three formats:

`[ 0.906 0.8 0.608 ]`

Red, green, and blue color components between 0 and 1 in square brackets.

`[ 231 204 155 ]`

Red, green, and blue color components between 0 and 255 in square brackets.

`(e7cc9b)`

Red, green, and blue (RrGgBb) hexadecimal color components between `00` and `FF` (or `ff`) in parentheses.
In the command arguments `[`*rgb* ...`]` indicates a bracketed sequence of colors. For example:

`[(c28847) [231 204 155] [0.635 0.008 0.094]]`

Parameters

`\psMarble[` *parameter-assignment* `, ... ,` *parameter-assignment* `](`*width*`,`*height*`)`
`\psMarble[` *parameter-assignment* `, ... ,` *parameter-assignment* `](`$x-$`,`$y-$`)(`$x+$`,`$y+$`)`

The comma separated parameter assignments are part of the `\psMarble` command. In the list below, the default value for each parameter is shown to the right of the parameter name. Note that the values assigned to `background=`, `colors=`, `seed=`, `actions=`, and `spractions=` must be enclosed in curly braces `{}`.

`background= {[0 0 0]}`

Specifies the color for regions where paint has not been dropped (or moved to).

`bckg= true`

When `bckg=false` the background color is not shown.

`colors= { [0.275 0.569 0.796] [0.965 0.882 0.302] [0.176 0.353 0.129] [0.635 0.008 0.094] [0.078 0.165 0.518] [0.824 0.592 0.031] [0.059 0.522 0.392] [0.816 0.333 0.475] [0.365 0.153 0.435] [0.624 0.588 0.439] }`

Specifies a color sequence accessible in paint-dropping commands as `colors`.

`drawcontours= false`

When `drawcontours=true` paint contours are drawn with lines; when `drawcontours=false` contours are filled;

`oversample= 0`

When `oversample=0` a resolution-independent image is produced using contour-rendering. When the number of drops gets too large (> 150) triangular artifacts start to appear. Changing to `oversample=1` employs raster-rendering to more quickly compute each image pixel individually. When `oversample=2` the rendering takes four times as long, but each pixel is the averaged over its four quarters, producing an image nearly as good as `oversample=0`. When `oversample` is between 0 and 1, the rendering is on a coarser grid than `oversample=1`, speeding image production.

`overscan= 1`

When the `overscan` value is greater than 1, proportionally more image (outside of the specified area) is shown, and the specified area is outlined with a dashed rectangular border. This is a utility for developing marblings, new for version 1.4.

`seed= {Mathematical Marbling}`

Specifies the random seed used for `Gaussian-drops` and `uniform-drops` commands. Changing the `seed` value changes the positions of all drops from the `Gaussian-drops` and `uniform-drops` commands.

`viscosity= 1000`

Specifies the overall kinetic viscosity of the virtual tank fluid. Its units are mm^2/s; the default value of 1000, which is 1000 times more viscous than water, is a typical value for marbling. Increasing `viscosity` reduces the fluid movement far from the tines.

`actions= {0 0 36 colors 35 concentric-rings}`

Specifies the sequence of marbling commands to perform. The default is a single command dropping 35 colors in the `colors` sequence. The available commands are listed below.

`spractions= {}`

Specifies the sequence of spray commands to perform. Spray commands are performed after marbling.

Dropping Paint

$x\ y\ R_d\ rgb$ `drop`

Places a drop of color rgb and radius R_d centered at location x, y.

$x\ y\ R_i$ [rgb ...] n `concentric-rings`

Places n rings in color sequence [rgb ...] centered at location x, y, each ring having thickness R_i.

$x\ y\ \theta$ [R ...] [rgb ...] R_d `line-drops`

Places drops of colors [rgb ...] (in sequence) of radius R_d in a line through x, y at θ degrees clockwise from vertical at distances [R ...] from x, y.

$x\ y$ [Ω_x ...] [Ω_y ...] θ [rgb ...] R_d `serpentine-drops`

Places drops of colors [rgb ...] of radius R_d in a serpentine pattern (starting lower left to right; right to left; left to right...) at offsets $\Omega_x \times \Omega_y$ centered at location x, y and rotated by θ degrees clockwise from vertical. Orders of Ω_x and Ω_y matter.

$x\ y\ R\ \theta\ S\ \delta$ [rgb ...] $n\ R_d$ `coil-drops`

Places n drops of colors [rgb ...] (in sequence) of radius R_d in an arc or spiral centered at x, y starting at radius R and θ degrees clockwise from vertical, moving S along the arc and incrementing the arc radius by δ after each drop.

$x\ y\ R\ \theta\ \epsilon$ [rgb ...] $n\ R_d$ `Gaussian-drops`

Places n drops of colors [rgb ...] of radius R_d randomly in a circular or elliptical disk centered at x, y having mean radius R, θ degrees clockwise from vertical, and length-to-width ratio ϵ. For a circular disk, 63 % of drops are within radius R, 87 % of drops are within $R\sqrt{2}$, and 98 % of drops are within radius $2\,R$.

$x\ y\ L_x\ L_y\ \theta$ [rgb ...] $n\ R_d$ `uniform-drops`

Places n drops of colors [rgb ...] of radius R_d randomly in a L_x by L_y rectangle centered at location x, y and rotated by θ degrees clockwise from vertical.

Deformations

θ [R ...] $V\ S\ D$ `rake`

Pulls tines of diameter D at θ degrees from the y-axis through the virtual tank at velocity V, moving fluid on the tine path a distance S. The tine paths are spaced [R ...] from the tank center at their nearest points.

$x_b\ y_b\ x_e\ y_e\ V\ D$ `stylus`

Pulls a single tine of diameter D from x_b, y_b to x_e, y_e at velocity V. Legacy `stroke` also works.

$x\ y$ [R ...] $\omega\ \theta\ D$ `stir`

Pulls tines of diameter D in circular tracks of radii [R ...] (negative R is counterclockwise) around location x, y at angular velocity ω. The maximum angle through which fluid is moved is θ degrees.

$x\ y\ \Gamma\ t$ `vortex`

Rotates fluid clockwise around location x, y as would result from an impulse of circulation Γ after time t. At small t the rotational shear is concentrated close to the center. As time passes the shear propagates outward.

$\theta\ \lambda\ \Omega\ S$ `wiggle`

Applies sinsusoidal wiggle with period λ and maximum displacement S to whole tank. With $\theta = 0$, a point at x, y is moved to $x + S\ \sin(360\,y/\lambda + \Omega), y$.

$\theta\ R$ `shift`

Shifts tank by R at θ degrees clockwise from vertical.

[$n\ S\ \Omega$ `tines`]

The tines command and its arguments are replaced by a sequence of n numbers. The difference between adjacent numbers is S and the center number is Ω when n is odd and $S/2 - \Omega$ when n is even.

Spray Actions

Spray actions are intended for drops small enough that they don't noticeably move paint boundaries. The radii of spray droplets are the cube roots of log-normal distributed values with mean R_d.

$x\ y\ R\ \theta\ \epsilon$ [rgb ...] $n\ R_d$ `Gaussian-spray`

Places n drops of colors [rgb ...] randomly in a circular or elliptical disk centered at x, y having mean radius R, θ degrees clockwise from vertical, and length-to-width ratio ϵ. For a circular disk, 63 % of drops are within radius R, 87 % of drops are within $R\sqrt{2}$, and 98 % of drops are within radius $2\,R$.

$x\ y\ L_x\ L_y\ \theta$ [rgb ...] $n\ R_d$ `uniform-spray`

Places n drops of colors [rgb ...] randomly in a L_x by L_y rectangle centered at location x, y and rotated by θ degrees clockwise from vertical.