Claims

1. Use of a pharmaceutical composition containing tetraarsenic hexoxide (As_4O_6) as an active ingredient in the manufacture of a medicament for prevention or treatment of brain cancer, wherein the tetraarsenic hexoxide includes 99 wt% or more of tetraarsenic hexoxide crystalline polymorph a having features (i) to (iii) below:

(i) Cell parameters:

$a = b = c = 11.0734$ Å

$\alpha = \beta = \gamma = 90°$

$V = 1357.82$ Å^3

(ii) As-O bond length: 1.786 Å

(iii) O-As-O bond angle: 98.36°.

2. The use according to claim 1, wherein the tetraarsenic hexoxide has a purity of 99.9% or higher.

3. The use according to claim 1, wherein in the X-ray powder diffraction spectrum of the crystalline polymorph a, obtained by using a light source wavelength of 1.5406 Å within a diffraction angle (2θ) of 10° to 50° at a rate of 1°/min (scan step of 0.02°), peaks are shown at 2θ values of 13.84, 27.88, 32.32, 35.3, 39.84, 42.38, 46.34, 48.6, and 49.34.

4. Use of a pharmaceutical composition containing tetraarsenic hexoxide (As_4O_6) as an active ingredient in the manufacture of a medicament for inhibition of brain cancer metastasis, wherein the tetraarsenic hexoxide includes 99 wt% or more of tetraarsenic hexoxide crystalline polymorph a having features (i) to (iii) below:

(i) Cell parameters:

$a = b = c = 11.0734$ Å

$\alpha = \beta = \gamma = 90°$

$V = 1357.82$ Å^3

(ii) As-O bond length: 1.786 Å

(iii) O-As-O bond angle: 98.36°