

Sample ^a	River / Setting	Note ^b	Mean latitude ^c [°S]	Mean elevation ^c [m]	¹⁰ Be prod. Rate ("old") ^d [at/g _(Qz) /yr]	¹⁰ Be conc. ("C _{old} ") ^e [x10 ⁴ at/g _(Qz)]	²⁶ Al conc. ("old") ^f [x10 ⁴ at/g _(Qz)]	²⁷ Al conc. ^g [µg/g]	²⁶ Al/ ¹⁰ Be Ratio ("old") ^h	¹⁰ Be conc. ("C _{new} ") ⁱ [x10 ⁴ at/g _(Qz)]	²⁶ Al conc. ("C _{new} ") ^j [x10 ⁴ at/g _(Qz)]	²⁶ Al/ ¹⁰ Be Ratio ("new")
Andean tributary samples												
Pe 107a-2	Ucayali at Requena		-4.48	1713	18.0	5.03 ± 0.39	34.31 ± 7.48	393.20 ± 16.43	6.82 ± 1.58	4.59	32.01	6.97
Pe 101a-2	Solimões at Tamshiyacu (Upper Amazon R.)		-7.75	1432	14.3	8.04 ± 0.85	49.29 ± 5.85	176.41 ± 10.42	6.13 ± 0.97	7.33	45.98	6.27
Gr 17b	Grande at Puerto Pailas		-18.50	2104	18.3	2.64 ± 0.26	18.83 ± 2.30	73.24 ± 4.58	7.13 ± 1.11	2.41	17.57	7.29
Guyana shield samples- Branco River												
Br 1a	Branco		3.37	397	5.2	35.10 ± 1.56	216.03 ± 15.15	219.33 ± 7.60	6.16 ± 0.51	32.02	201.52	6.29
Br 4c	Branco		3.32	386	5.2	31.99 ± 1.55	185.64 ± 16.74	165.06 ± 9.18	5.80 ± 0.59	29.19	173.17	5.93
Br 5b	Branco		3.05	386	5.1	46.91 ± 3.95	183.26 ± 17.16	93.88 ± 3.25	3.91 ± 0.49	42.80	170.95	3.99
Br 5c	Branco		3.05	332	5.1	33.87 ± 2.22	189.78 ± 12.01	75.59 ± 3.02	5.60 ± 0.51	30.90	177.03	5.73
Br 8b-2	Branco		2.79	331	5.0	32.20 ± 2.10	169.62 ± 12.14	103.41 ± 3.87	5.27 ± 0.51	29.38	158.22	5.39
Brazilian shield- upper Madeira River tributaries												
Cb 2a	Guaporé at Pimenteiras		-14.73	350	5.1	16.16 ± 0.87	101.88 ± 6.94	94.19 ± 2.21	6.30 ± 0.55	14.74	95.03	6.45
Cb 3a-2	Aripuana at Aripuana		-11.02	260	4.7	37.79 ± 3.97	184.71 ± 14.39	128.83 ± 4.66	4.89 ± 0.64	34.48	172.31	5.00
Brazilian shield- upper Tapajós River tributaries												
Cb 4a-1	Juruena at Juruena		-12.62	403	4.9	11.75 ± 1.07	78.44 ± 7.61	63.96 ± 3.10	6.68 ± 0.89	10.72	73.17	6.82
Cb 6b-3	Teles Pires near Rochedo		-11.85	371	5.3	17.50 ± 0.95	99.27 ± 8.66	66.05 ± 2.59	5.67 ± 0.58	15.96	92.61	5.80
Cb 7b-2	Teles Pires at P. Azevedo		-10.44	363	5.1	32.90 ± 4.04	164.70 ± 14.64	96.80 ± 6.76	5.01 ± 0.76	30.02	153.63	5.12
Xingu River (does not drain into Amazon basin at Óbidos)												
Cb 8b-2	Xingu near S. José		-12.62	346	5.1	22.45 ± 0.96	114.75 ± 6.27	60.09 ± 1.33	5.11 ± 0.35	20.49	107.05	5.23
Amazon lowland samples from various rivers												
Ne Rb-a	Negro near Paricatuba	right bank	-10.69	225	3.9	10.28 ± 0.47	47.66 ± 3.35	31.27 ± 1.14	4.64 ± 0.39	9.38	44.46	4.74
Ne Rb-b	Negro near Paricatuba	right bank	-10.69	225	3.9	9.14 ± 0.57	47.54 ± 3.21	38.15 ± 0.93	5.20 ± 0.48	8.34	44.34	5.32
Ne Lb-a	Negro near Paricatuba	left bank	-10.69	225	3.9	8.05 ± 0.65	32.55 ± 2.56	27.85 ± 1.15	4.04 ± 0.46	7.35	30.37	4.13
Ne Lb-b	Negro near Paricatuba	left bank	-10.69	225	3.9	7.45 ± 0.39	32.10 ± 2.59	30.59 ± 1.12	4.31 ± 0.41	6.80	29.94	4.40
Man 0.2a	Solimões/Amazon at Manacapuru	0.2 km flb	-5.57	592	7.1	6.37 ± 0.40	53.94 ± 20.58	1473.69 ± 85.74	8.47 ± 3.27	5.81	50.32	8.66
Man 1.1b	Solimões/Amazon at Manacapuru	1.1 flb	-5.57	592	7.1	7.60 ± 0.33	32.81 ± 8.74	203.35 ± 5.67	4.32 ± 1.17	6.93	30.61	4.41
Man 1.1c-2	Solimões/Amazon at Manacapuru	1.1 flb	-5.57	592	7.1	8.01 ± 0.69	48.09 ± 4.66	97.14 ± 2.28	6.00 ± 0.78	7.31	44.86	6.14
Man 2.4a	Solimões/Amazon at Manacapuru	2.4 flb	-5.57	592	7.1	6.15 ± 0.70	33.38 ± 4.11	173.12 ± 5.37	5.43 ± 0.91	5.61	31.14	5.55
Ir 0.4b	Amazon at Iracema	0.4 flb	-3.90	491	5.9	8.77 ± 0.56	49.36 ± 16.18	383.98 ± 30.39	5.63 ± 1.88	8.00	46.05	5.76
Ir 0.4c	Amazon at Iracema	0.4 flb	-3.90	491	5.9	13.31 ± 0.47	92.86 ± 8.26	101.03 ± 5.80	6.98 ± 0.67	12.15	86.62	7.13
Ir 1.0b	Amazon at Iracema	1.0 flb	-3.90	491	5.9	8.94 ± 0.46	47.12 ± 6.45	88.47 ± 4.54	5.27 ± 0.77	8.16	43.95	5.39
Ir 1.0c	Amazon at Iracema	1.0 flb	-3.90	491	5.9	14.44 ± 0.72	64.56 ± 4.92	86.91 ± 2.16	4.47 ± 0.41	13.17	60.22	4.57
Ir 1.5b	Amazon at Iracema	1.5 flb	-3.90	491	5.9	10.10 ± 0.44	38.34 ± 8.08	201.14 ± 6.96	3.80 ± 0.82	9.21	35.76	3.88
Ir 1.5c	Amazon at Iracema	1.5 flb	-3.90	491	5.9	15.50 ± 0.57	72.36 ± 5.98	82.14 ± 2.26	4.67 ± 0.42	14.15	67.50	4.77
Mad 1.1c	Madeira at Amazon confl.	1.1 flb	-13.04	552	5.3	21.80 ± 0.97	104.37 ± 10.36	184.47 ± 5.86	4.79 ± 0.52	19.89	97.36	4.89

Mad 1.8b	Madeira at Amazon conflu.	1.8 flb	-13.04	552	5.3	6.56 ± 0.38	43.65 ± 16.31	918.21 ± 59.40	6.65 ± 2.51	5.99	40.72	6.80
Par 0.9a	Amazon at Parintins	0.9 flb	-6.59	498	5.6	6.20 ± 0.36	36.49 ± 4.14	127.23 ± 3.58	5.89 ± 0.75	5.66	34.04	6.02
Par 2.2b	Amazon at Parintins	2.2 flb	-6.59	498	5.6	6.83 ± 0.62	44.05 ± 20.73	854.41 ± 20.71	6.45 ± 3.09	6.23	41.09	6.60
Ama-b	Amazon near Óbidos	2.2 flb	-6.34	478	5.7	8.32 ± 0.40	34.60 ± 10.27	547.74 ± 18.58	4.16 ± 1.25	7.59	32.27	4.25
Tapa-b-2	Tapajós near Santarem	2.2 flb	-9.62	288	4.0	10.54 ± 0.65	71.22 ± 4.48	49.20 ± 1.50	6.75 ± 0.59	9.62	66.44	6.91
Tapa-c	Tapajós near Santarem	2.2 flb	-9.62	288	4.0	8.85 ± 0.56	50.56 ± 4.16	57.05 ± 1.93	5.71 ± 0.59	8.08	47.17	5.84
Central Amazon floodplain samples ("Varzea do Curuai", see Wittmann and von Blanckenburg, 2009)												
Soc-b	Lago Grande at V. Soccurru	lake	-2.22	37	4.0	4.73 ± 0.42	28.60 ± 3.92	73.23 ± 1.74	6.05 ± 0.99	4.31	26.68	6.19
Soc-c1	Lago Grande at V. Soccurru	lake	-2.27	37	4.0	4.73 ± 0.22	30.38 ± 4.25	124.63 ± 5.79	6.42 ± 0.95	4.31	28.33	6.57
Gran-b	Lago Grande at Curuai	lake	-2.27	37	4.0	6.84 ± 0.41	45.79 ± 5.72	76.04 ± 3.66	6.70 ± 0.93	6.24	42.71	6.85
Gran-c	Lago Grande at Curuai	lake	-2.27	37	4.0	5.45 ± 0.35	33.90 ± 3.59	84.53 ± 2.05	6.22 ± 0.77	4.97	31.63	6.36
Curu-a	Lago Curumucuri	lake	-2.13	37	4.0	14.74 ± 0.79	50.47 ± 4.43	112.67 ± 3.24	3.42 ± 0.35	13.45	47.08	3.50
Curu-b	Lago Curumucuri	lake	-2.13	37	4.0	10.17 ± 0.44	28.49 ± 2.76	62.00 ± 1.91	2.80 ± 0.30	9.28	26.58	2.86

^aSample codes are: "a, b, c" for different grain sizes, and "1, 2, 3" are replicate analysis carried out over the course of 3 years, codes as in Wittmann et al. (2011). Data for sample Gr 17b was taken from Wittmann et al. (2009).

^bThe note is giving the positions perpendicular to the left bank (in km from left bank "flb"), from which samples were dredged; other samples were taken from the active river bank/beach and are denoted as "bulk".

^cMean pixel-based basin-wide latitude and elevation (including Andean area) derived from DEM analysis; for Soc, Gran, and Curu samples, a common mean elevation was assumed.

^dTotal basin-wide, pixel-based ¹⁰Be production rate from spallogenic and muonic production as used in Table 1 of Wittmann et al. (2011), calculated relative to a SLHL production rate of 5.53 at/g_(Qz)/yr (Kubik et al., 1998).

^e¹⁰Be concentration corrected for blank, i.e. 1σ uncertainty contains analytical error of AMS measurement that was carried out rel. to

standard S555 (nominal value of ¹⁰Be/⁹Be = 95.5×10⁻¹²) and a ¹⁰Be half-life of 1.51 Myr (Hofmann et al., 1987).

^f²⁶Al concentration; uncertainty (1σ) contains analytical error of AMS measurement that was carried out rel. to standard ZAL94 (nominal value of ²⁶Al/²⁷Al = 526×10⁻¹²) and analytical error of ICP-OES measurement and weighing errors of aliquots and standards. No blank-correction applied.

^g1σ uncertainty contains analytical as well as blank error propagation.

^hA surface ²⁶Al/¹⁰Be ratio of 6.5 ± 0.5 (Kubik et al., 1998) is related to the AMS standardizations used; a ratio below ~6.5 denotes burial of sample.

ⁱOld concentrations of all Amazon basin samples were re-normalized due to the new AMS standardization used at ETH Zurich since April 1st, 2010 (http://www.ams.ethz.ch/publications/annual_reports (page 12); Kubik and Christl, 2010)). This new standardization is compatible with the new ¹⁰Be half-life of 1.387 Myr (Chmeleff et al., 2010; Korschinek et al., 2010).

In order to recalculate the denudation rate estimates with a set of other production rates (Balco et al., 2008), the following steps have to be followed:

1. Use our new (re-normalized) nuclide concentrations: $^{10}\text{BeConc}_{\text{new}} = ^{10}\text{BeConc}_{\text{old}}/1.096$.
2. Reduce the SLHL production rate we used (5.53 at/g_(Qz)/yr) by a factor of 1.096 (Kubik and Christl, 2010) to "Prod.Rate_{old-re-norm}".
3. Multiply the old denudation rate estimate by a factor of Prod.Rate_{new}/ProdRate_{old-re-norm}.

^jRe-normalization of ²⁶Al concentrations is done by reducing the old concentrations with a factor of 1.072 (http://www.ams.ethz.ch/publications/annual_reports (page 10); Kubik and Christl, 2010)).

The corresponding ²⁶Al half-life is 0.705 Myr (Norris et al., 1983).