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Correction to the paper: Support functionals and smoothness in Musielak-Orlicz sequence spaces endowed with the Luxemburg norm

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to the paper "Support functionals and smoothness in Musielak-Orlicz sequence spaces endowed with the Luxemburg norm"

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The main purpose of this postscript is to rectify the errata detected in our paper [1].

Page 662, the definition of $\partial\Psi(u)$: there should be $\partial\Psi(u) = [\Psi^-(u), \Psi^+(u)]$ for any $u \in (-b(\Psi), b(\Psi))$.

Page 662, line 20: there should be "$b_i = b(\Phi_i)$" instead of "$b_i = b_i(\Phi_i)$".

Page 665, Lemma 1.4: there should be assumed additionally that $|x_i| < b_i$ for any $i \in \mathbb{N}$. The lemma is not true without this additional assumption. Of course, this assumption is always satisfied for finite valued functions Φ_i.

Page 665, first line after inequality (1.7): there should be "is" instead of "is not".

Page 666, line 6: there should be "(1.7) and (1.9)" instead of "(1.9) and (1.10)".

Page 667, Corollary 1.5: there should be "$\partial\Phi_i(|x_i|) = \{+\infty\}$" instead of "$\partial\Phi_i(x_i) = +\infty$ or $\partial\Phi_i(x_i) = -\infty$".

Page 667, the proof of Corollary 1.5: it should be changed to the following one. If $\partial\Phi_j(x_j) = \{+\infty\}$ for some $j \in \operatorname{supp} x^*$ and $|x_i| < b_i$ for some $i \neq j$, then we can find $\overline{x}_i$, $\overline{x}_j$, $x_i < \overline{x}_i < +\infty$, $0 < \overline{x}_j < x_j$ such that (1.11), (1.12) and the inequalities from the lines 11 and 13 of this page hold true. Repeating the remaining part of the proof of Lemma 1.4, we obtain the contradiction $x^* \notin \operatorname{Grad}(x)$.

Page 667, Lemma 1.6 (ii): there should be assumed additionally that $\partial\Phi_i(b_i) = \{+\infty\}$ for some $i \in A_x^\infty$.

Page 669, Theorem 1.9: instead of "$A = \operatorname{supp} x^*$" there should be "$A = \mathbb{N}$". Moreover, it should be assumed that $|x_i| < b_i$ for any $i \in \mathbb{N}$.

References

[1] Hudzik H., Ye Y., *Support functionals and smoothness in Musielak-Orlicz sequence spaces endowed with the Luxemburg norm*, Comment. Math. Univ. Carolinae **31** (1990), 661–684.

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