THE DIAGONAL OF THE FREMLIN TENSOR SQUIRE OF A BANACH LATTICE

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ABSTRACT. Fremlin tensor product $E \otimes_{|\pi|} F$ of Banach lattices E and F is a natural analogue of the projective tensor product of Banach spaces. If E is a sequence space, its Fremlin tensor square $E \otimes_{|\pi|} F$ can be identified with infinite matrices; one can then consider the subspace of the diagonal matrices. We characterize this subspace and extend the concept of the tensor diagonal to arbitrary Banach lattices.