We investigate the known exact solutions of hydrodynamics and derive analytic formulas for the polarization of baryons produced at freeze-out. Such polarization (observed in high-energy heavy-ion experiments) carries information on the time evolution of the quark–gluon plasma (sQGP), and our results give first analytic insight into the connection between this type of measurements and dynamical properties of the sQGP (e.g., vorticity). We present results for a rotating and acceleratingly expanding solution and also give hints on how to calculate the polarization using a rotating extension of the Buda–Lund parameterization.

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