



QIAGEN Supplementary Protocol:

Scalable purification of archive-quality DNA from whole blood using the Gentra® Puregene® Blood Kit

This protocol provides information about scaling of reagents required for purification of DNA from 1–10 ml samples of fresh or frozen whole blood using the Gentra Puregene Blood Kit.

The Gentra Puregene Blood Kit enables convenient, scalable purification of DNA from fresh or frozen whole blood. Reagent volumes are scaled proportionately according to the amount of starting material. Tables 1 and 2 show the volumes of reagents required for DNA purification from 1–10 ml whole blood. The information provided in Tables 1 and 2 is intended to supplement the information given in “Protocol: DNA Purification from Whole Blood or Bone Marrow Using the Gentra Puregene Blood Kit” in the *Gentra Puregene Handbook*.

IMPORTANT: Please read the *Gentra Puregene Handbook*, paying careful attention to the safety information, before beginning this procedure. For safety information on the additional chemicals mentioned in this protocol, consult the appropriate material safety data sheets (MSDSs), available from the product supplier. The Gentra Puregene Blood Kit is intended for molecular biology applications. This product is not intended for the diagnosis, prevention, or treatment of a disease.

Table 1. Purification of DNA from 1–5 ml samples of whole blood

	Volume of whole blood (ml)				
	1	2	3	4	5
Tube size (ml)	15	15	15	50	50
Volume of RBC Lysis Solution (ml)	3	6	9	12	15
Volume of Cell Lysis Solution (ml)	1	2	3	4	5
Volume of RNase A Solution (μl)	5	10	15	20	25
Volume of Protein Precipitation Solution (ml)	0.333	0.667	1	1.33	1.67
Volume of 100% isopropanol (ml)	1	2	3	4	5
Volume of 70% ethanol (ml)	1	2	3	4	5
Volume of DNA Hydration Solution (μl)	100	200	250	400	500
Typical DNA yield (μg)*	15–45	30–90	50–150	65–200	100–250

* Assumes an average of 7×10^6 white blood cells per milliliter whole blood.

Table 2. Purification of DNA from 6–10 ml samples of whole blood

	Volume of whole blood (ml)				
	6	7	8	9	10
Tube size (ml)	50	50	50	50	50
Volume of RBC Lysis Solution (ml)	18	21	24	27	30
Volume of Cell Lysis Solution (ml)	6	7	8	9	10
Volume of RNase A Solution (μl)	30	35	40	45	50
Volume of Protein Precipitation Solution (ml)	2	2.33	2.67	3	3.33
Volume of 100% isopropanol (ml)	6	7	8	9	10
Volume of 70% ethanol (ml)	6	7	8	9	10
Volume of DNA Hydration Solution (μl)	600	700	800	900	1000
Typical DNA yield (μg)*	100–300	120–350	140–400	155–450	150–500

* Assumes an average of 7×10^6 white blood cells per milliliter whole blood.

QIAGEN handbooks can be requested from QIAGEN Technical Service or your local QIAGEN distributor. Selected handbooks can be downloaded from www.qiagen.com/literature/handbooks/default.aspx. Material safety data sheets (MSDS) for any QIAGEN product can be downloaded from www.qiagen.com/ts/msds.asp.

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