

Contents

1	Introduction	7
1.1	RNA – the central workhorse of life.	7
1.2	Advantages of studying RNA.	11
1.3	Regulation of DNA transcription	12
2	RNA extraction	15
2.1	Experimental design	15
2.1.1	Replication	16
2.2	Sample collection in the field and storage	17
2.3	Extraction.	18
2.3.1	Principle of extraction	19
2.3.2	Cellular disruption	19
2.3.3	RNA isolation	23
2.4	Quality check.	26
2.4.1	Concentration measurements (Qubit4)	27
2.4.2	Concentration and RNA integrity number (RIN) measurements (TapeStation)	29
References		35
Appendices		39