

# دستورالعمل جمع آوری، انتقال، آماده سازی و نگهداری نمونه ها برای آزمایشات مولکولی

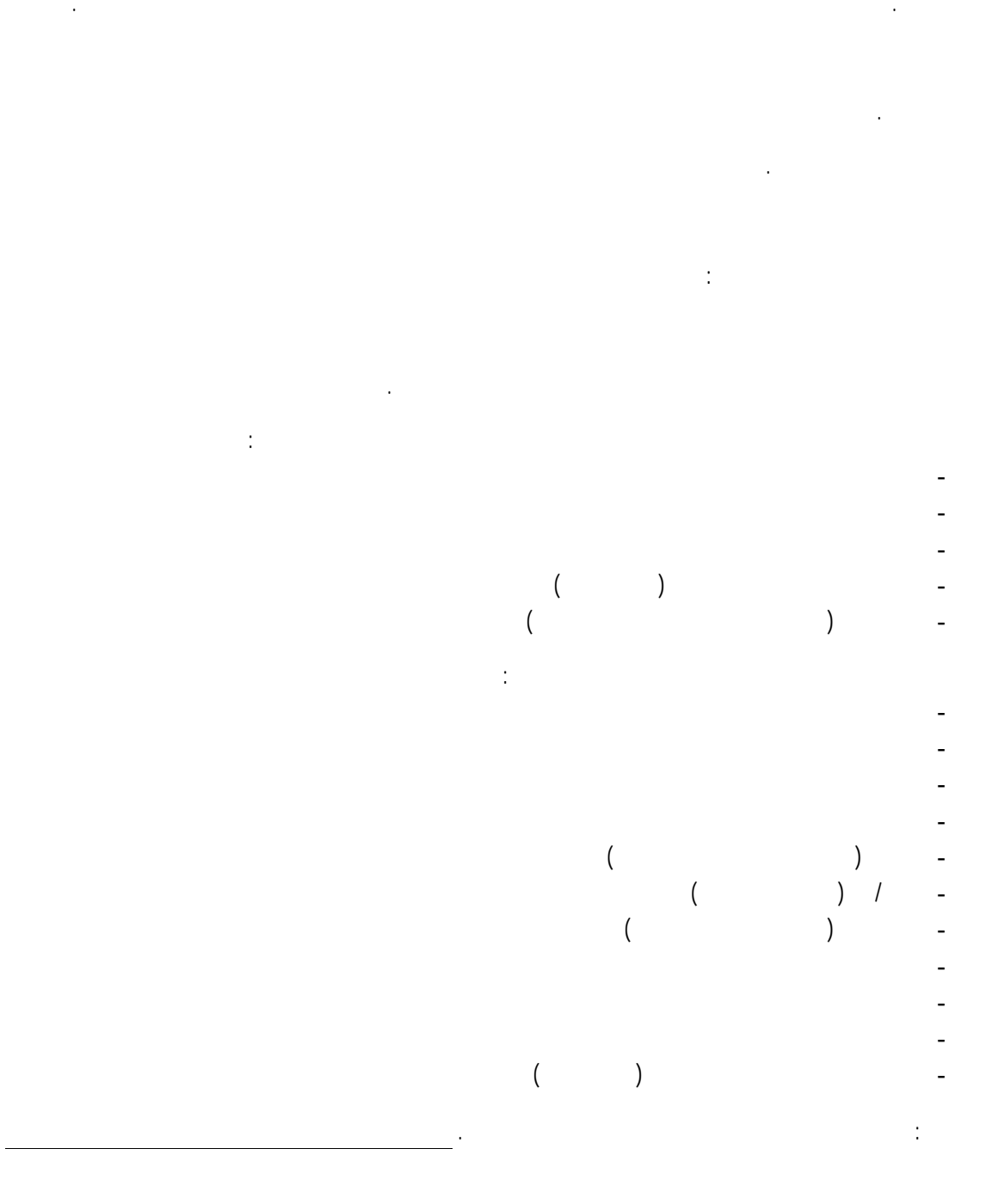
این راهنما به منظور ارائه اطلاعات علمی و فنی لازم در ارتباط با نمونه هایی که برای آزمایشات مولکولی تهیه شده است. این مجموعه ترجمه پروتکل MM13-A می‌باشد و که در کمیته ویروس شناسی و بیولوژی مولکولی مورد بررسی و تایید قرار گرفته است.

مترجمین به ترتیب الفبا:

-  
-

اعضا کمیته ویروس شناسی و بیولوژی مولکولی به ترتیب حروف الفبا عبارتند از:

-  
-



Linkage analysis

(blood-borne)

(HPV)

/

:

-

:

:

:

( )

(

).

(

(

(

DNA RNA

<sup>1</sup> Bucal Cell

DNA

DNA RNA

DNA RNA

( )

DNA RNA

DNA RNA

( DNA RNA)

DNA RNA

RNA

DNA RNA

pH

CVS

CVS

DNA

)

CVS

CVS

(endometrial decidual

CVS

CVS

)

(

CVS

DNA

DNA

DNA

<sup>2</sup> Prenatal  
<sup>3</sup> Chorionic Villus Sampling

CVS

(Polyester tipped)

(Rayon)

HPV

<sup>4</sup> Inverted Microscope

(RNA DNA)

(home brewed)

DNA

RNA

mRNA

<http://www.cdc.gov/od/ohs/biosfty/biosfty.htm>

<http://www.cdc.gov/od/ohs/pdffiles/DOTHAZMAT8-14-02.pdf>

[http://www.who.int/csr/resources/publications/WHO\\_CDS\\_CSR\\_LYO\\_2004\\_9/en/](http://www.who.int/csr/resources/publications/WHO_CDS_CSR_LYO_2004_9/en/)

**DNA**

DNA

DNA

DNase

DNA

DNA

DNA

(Tris-EDTA) TE

DNA

(DNase

)

DNA

"frost-free"

DNA

DNA

RNA

RNA

RNA

(RNases)

RNA "

DNA RNA)

(

/



:

EDTA

( ) EDTA

HCV HIV RNA

DNA

RNA  
(mRNA )

RNA

RNA

DNA RNA

RNA

RNA

RNA

HCV HIV

° با توجه به عدم گزارش هایی که مورد پذیرش بین المللی باشد

<sup>6</sup> Frost-free

<sup>7</sup> Viral load

"heme"

Acid Citrate Dextrose (ACD) EDTA

:( )

DBS

DNA

DBS

(glassine)

DBS

PCR

DNA

( )

( )

EDTA

DNA

<sup>8</sup> Dried Blood Spots

<sup>9</sup> Bronchoalveolar Lavage (BAL)

EDTA

PCR

'Heme'

RNA

RNA

RNA

RNA

**(Buccal Cells)**

DNA RNA

RNA

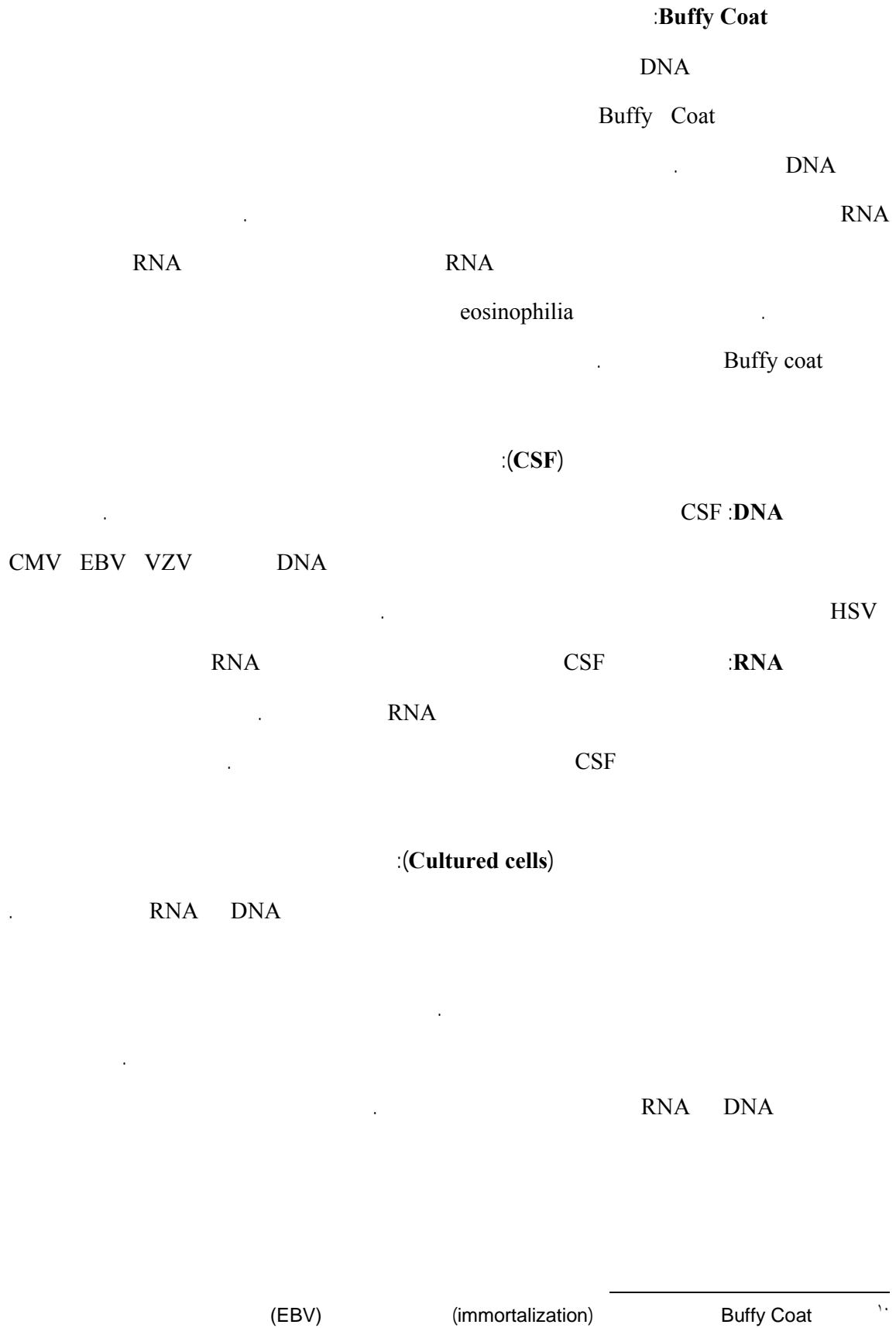
RNA

DNA

DNA

RNA

RNA



: (FNA )

)

RNA

DNA

RNA RNA .(

RNA

RNA

RNA

RNA

DNA :DNA

FISH inSitu

OCT

DNA

DNA

DNA

<sup>11</sup> Fine Needle Aspirate  
<sup>12</sup> Optimal Cutting Temperature

RPMI

RNA : RNA

RNA

RNA

RNA

(FISH ) inSitu

OCT

RNA

RNA

RNA

( )

OCT

<sup>13</sup> Roswell Park Memorial Institute  
<sup>14</sup> Guanidinium Isothiocyanate

RNase RNA

RNA

RNA

RNA

RNase

**: (Oral Fluids )**

RNA DNA

RNA

( )

**: (FFPET )**

FFPET

FFPET

DNA

DNA

)

(B5

RNA

RNA

FFPET

FFPET

<sup>15</sup> Formalin- Fixed Paraffin Embedded Tissue

**:Semen**

semen DNA .

DNA

. in situ hybridization

DNA

)

(

)

.(



( Brooms )

DNA

DNA RNA

( )

PCR

DNA

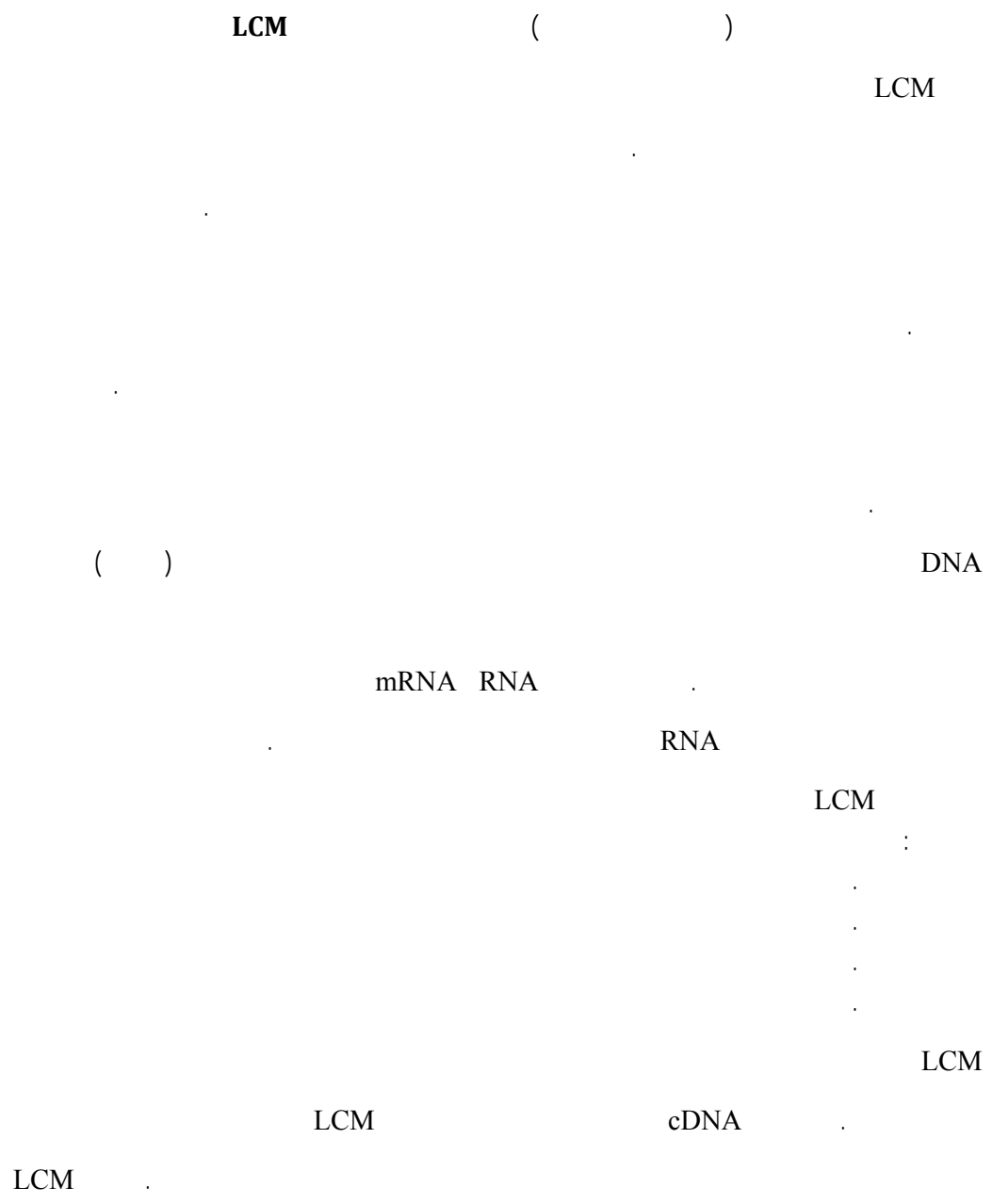
)

DNA

pH

(

RNA



ن

Nested :

PCR

PCR

( )

DNA : (DNA/RNA)

/ DNA

DNA يي

DNA

DNA

(g )

/ HBV HIV

(Vacuum)

(PH 7/4)

:

CSF :

**CSF**

bronchoalveolar lavage

NBF; Neutral )%

:( )

(Buffered Formalin

DNA

DNA

DNA

:

DNA

%

pH= %

DNA % :

RNA

% v/v DNA

DNA

(% ) : **Carnoy's fixative**

(% ) RNA RNA

(% ) : **Methacarn**

(% ) RNA RNA

AMeX :

DNA AMeX

RNA mRNA

AMeX

: **Hope**

/ / pH

RNA

RNA

RNA

---

<sup>17</sup> Acetone– Methylbenzoate- Xylen

<sup>18</sup> HEPES-glutamic acid buffer- mediated Organic solvent Protection Effect

RNA DNA .

RT\_PCR PCR

inSitu

inSitu

( )

(artifact)

DNA

PBS

Agar-Saline-Giemsa

**FFPET**

FFPET .

FFPET

DNA

FFPET

FFPET

FFPET

FFPET

( / )

B5

DNA

)

RNA DNA

FFPET

FFPET

DNA .

( Southern Blotting

DNA

DNA

FFPET

PCR

RT-PCR

RNA

FFPET

<sup>19</sup> Formalin Fixed Paraffin- Embedded Tissue

FFPET

( )  
DNA PCR

%

DNA

"K"

L.C.M.

DNA

DNA RNA ,

DNA

DNA

DNA

RNA

:

( )



RNA Chomezynski & Sacchi

RNA

RNA

RNA

***Target Capture***

( )

DNA

RNAase , DNAase

96<sup>°c</sup>

***Silica Technology***

Boom

(lysis and binding buffer)

RNAase  
pH

)

(

( )

(Micro Concentrator)

PBS

RNA

DNA

0.22



DNA .

DNA

( )

DNA

( )

DNA . ( )

DNA

DNA

pH

DNA .

DNA

DNA .

PCR



DNA

PCR DNA

( kb )

DNA

RNA

DNA

DNA

DNA

DNA

DNA

DNA

kb

DNA

DNA

DNA

DBS

PCR

DNA

DNA

DNA

DNA

DNA

DNA

RNA

RNA

DNA

RNA

RNA

RNase A

PCR

DNA

<sup>22</sup> Anion – Exchange Method

RNase .

DNA

DNA

DNase

**DNA**

K

:

K

**: Rotor Stator Homogenizer**

/

**DNA**

EDTA

DNA

DNA

DNA

DNA

DNA

g

K

*DNA*

DNA

(Home Made)

DNA

DNA

DNA

DNA

DNA

*DNA*

DNA



**DNA**  
 DNA . DNA  
 DNA . DNA  
 CSF  
 (Carries)DNA  
 RNA DNA  
 DNA DNA  
 DNA DNA  
**DNA**  
 K  
 ( ) K /  
 K /  
**RNA**  
 RNA  
 RNA  
 RNase (Chaotropic)  
 RNase RNA

## Rotor-Stator Homogenizer

)

.(.....

:

## :Bead Mills

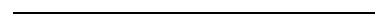
/

/

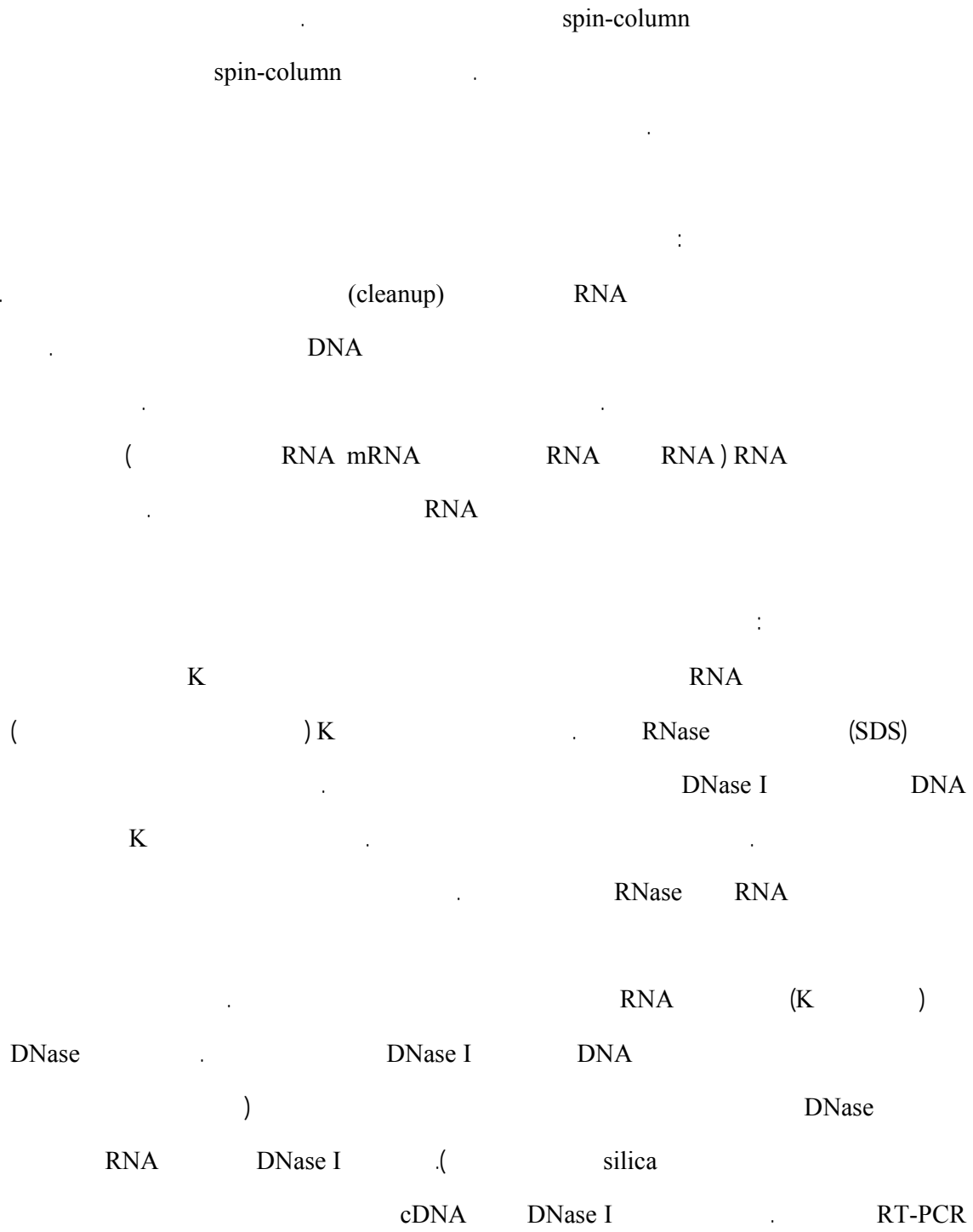
( )

)

(



# Spin-Column



(denaturant)

K

pH

RNA

DNA

pH

RNA

RNA

RNA

RNase

RNA

RNA

salting out

RNA

DNA

RNA

RNA

RNA

( )

RNA

DNA

RT-PCR

:

RNA

RNA

( )

36000 -40000 x g

RNA (supernatant)

DNA

RNA

RNA

5s rRNA tRNA RNA

DNA

RNA

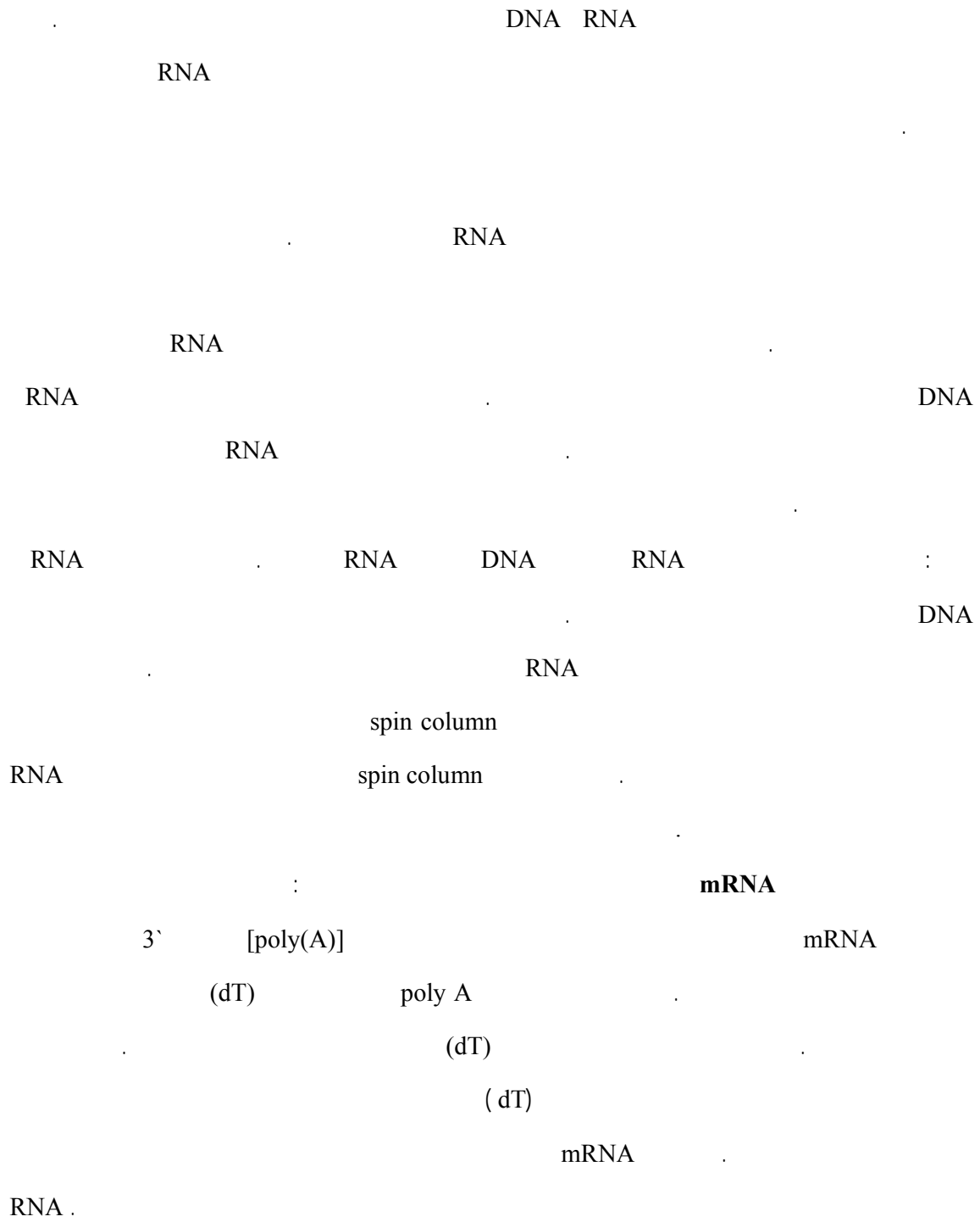
DNA RNA ( )

( ) RNA

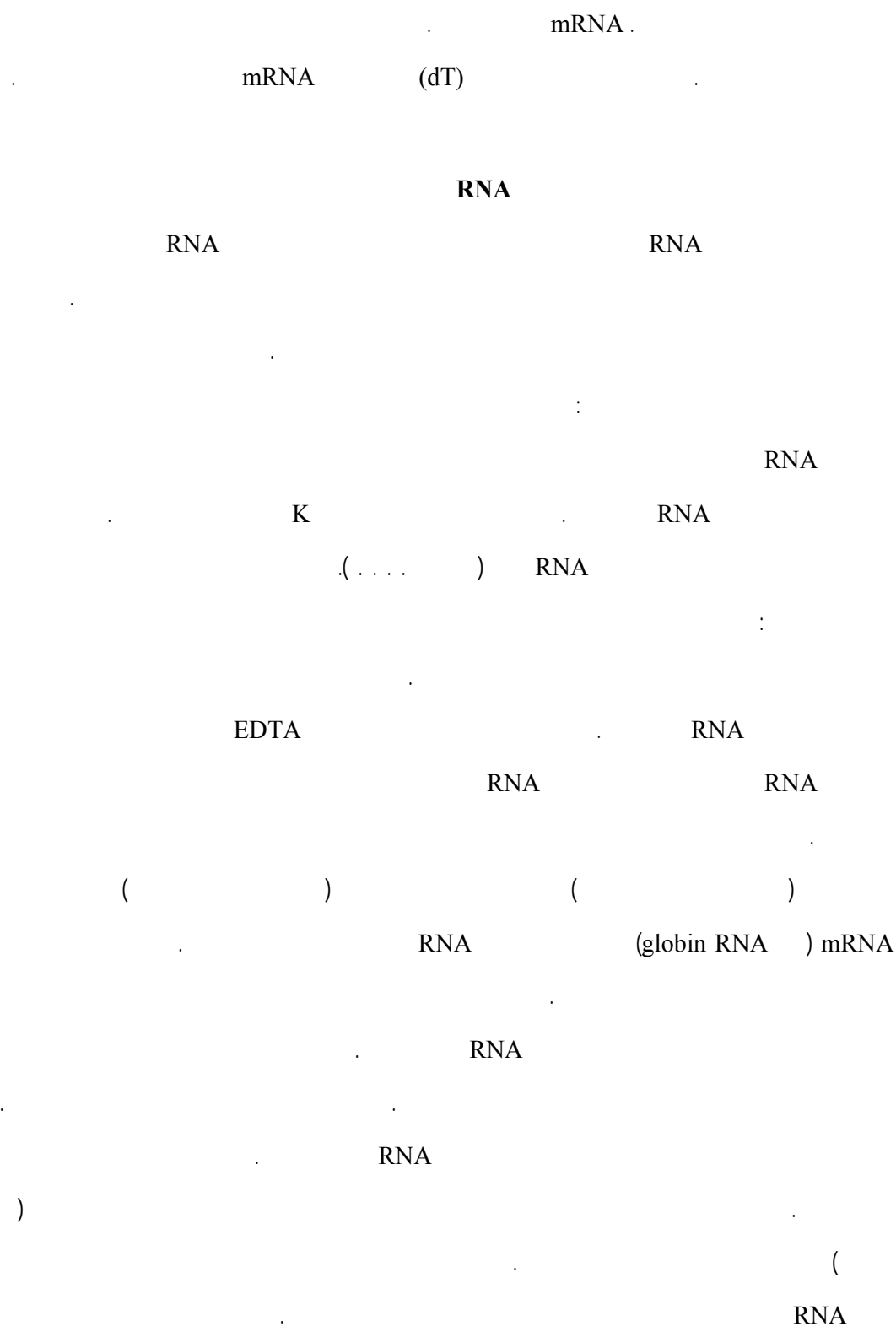
RNA

RNA

RNA



<sup>25</sup> Multiwell units  
<sup>26</sup> Oligo Affinity Chromatography



<sup>27</sup> Centrifugal vacuum concentrator  
<sup>28</sup> Density -Gradian Centrifugation

