Table 1
Methods of fixation and extraction for immunofluorescent microscopy

coagulant

Fixative/Extractor	Description	References
MeOH	PBS(rapid rinse), MeOH(-20 C, 5min), PBS(5min)	[8, 9]
EtOH	PBS(rapid rinse), EtOH(-20 C, 5min), PBS(5min)	[10]
Acetone	PBS(rapid rinse), Acetone(-20 C, 7min), PBS(5min)	[11]
10% TCA	TCA(ice-cold, 15min), 30mM glycine/PBS(wash x3)	[10, 12]
5%Sulfosalicylic acid	PBS(rapid rinse), 5%Sulfosalicylic acid(-20 C, 5min), PBS(5min)	This paper. Ref. [47]
Carnoy (EtOH/$CHCl_3$/AcOH, 60/30/10, v/v)	No detail information is available, but in the same way of 5%Sulfosalicylic acid	[55]
Bouin (saturated picric acid water/formalin/AcOH, 15/5/1, v/v)	No detail information is available, but in the same way of 5%Sulfosalicylic acid	[55]

non-coagulant (Some of the methods are combination of both coagulant and non-coagulant fixatives.)

Fixative	Extractor	Descriptions	References
3.5% FA/PBS	acetone	3.5% FA/PBS(rm, 20min), PBS(wash), acetone(-10 C, 7min), air dry	[52]
3.7% FA/PBS	0.1% Triton X-100/PBS	3.7% FA/PBS(5min), 0.1% Triton X-100/PBS (2min)	[48]
3.7% FA/PBS	0.2% Triton X-100/PBS	3.7% FA/PBS(20min), 0.2% Triton X-100/PBS (5min)	[58]
3.7% FA/PBS	0.5% Triton X-100/PBS	3.7% FA/PBS(5min), 0.5% Triton X-100/PBS (5min)	[9]
3.7% FA/PBS	1% Triton X-100/PBS	3.7% FA/PBS(5min),1% Triton X-100/PBS (5min)	[9]
3.7% FA/PBS(+)	0.2% Triton X-100/PBS	3.7% FA/PBS(+)(rm, 20min), 0.2% Triton X-100/PBS (rm, 1min), PBS(rinse, x3)	[51]
4% PFA/PBS	-	4% PFA/PBS(rm, 5min), PBS(rinse), $NaBH_4$/PBS(0.5mg/ml, rm. 10min), 5% serum/PBS(rm, 60min)	[45]
4% PFA+1%GA/PBS	0.2% TX100/PBS	4% PFA+1%GA/PBS(rm, 10min), 0.2% TX100/PBS(rm, 5min), $NaBH_4$/PBS(0.5mg/ml, rm. 10min)	[16]
4% PFA/PBS(+)	0.1% TX100/PBS	4% PFA/PBS(+)(15min), 50mM NH_4Cl/PBS(10min), 0.1% TX100/PBS(10min)	[57]
4% PFA/PBS	0.2% TX100/PBS	4% PFA(rm, 10min), 0.2% TX100/PBS(rm, 5min), $NaBH_4$/PBS(0.5mg/ml, rm. 10min)	[16, 56]
4% PFA/HBSS	acetone	4% PFA/HBSS(37 C, 15min), HBSS(rm, 5min), 100mMglycine/HBSS (rm, 5min), PBS(rm, 5min), acetone(-20 C, 5min), PBS(rm, 5min)	[8]
4% PFA/PBS	0.2% TX100+3.6%PFA/PBS acetone	4% PFA/PBS(rm, 20min), 0.2% TX100+3.6%PFA/PBS)(rm, 10min), PBS(rm, 10min), 50%, 100%, 50%acetone(4 C, 3min, each), PBS(rm, 10min), IgG(2mg/ml, rm, 15min)	[49]
4% PFA+0.05% GA/PB	-	4% PFA+0.05% GA/PB(4 C, 20min), 100mM PB(wash), 200mM glycine/PB (20min), $NaBH_4$(10min, x2), 2%serum/200mM glycine/PB(rm, 30min)	[44]
PLP	1% saponin+3% BSA/PBS	PLP(rm, 10min), 1% saponin+3% BSA/PBS(rm, 10min)	[17, 53]
LP	1% saponin+3% BSA/PBS	LP(rm, 10min), 1% saponin+3% BSA/PBS(rm, 10min)	[20]
-	0.2% TX100/MTSB+2.5mM GTP (3%Formalin+0.05%GA+0.05%TX100/MTPB)	MTSB+2.5mM GTP(rm, 30s), 0.2% TX100/MTSB+2.5mM GTP (rm, 30s, x2), 1%GA/MTSB+2.5mM GTP(rm, 10min), $NaBH_4$/PBS (0.5mg/ml, rm. 4min, x2), PBS(rm, wash, x3) 3%Formalin+0.05%GA+0.05%TX100/MTPB(20min),	[1]
(3.7% Formalin/PEM/0.2% TX100), MeOH		0.2% TX100/50mM Tris-HCl, pH7.5+150mM NaCl 3.7% Formalin/PEM/0.2% TX100 (5min, rm), PBS(wash), MeOH (ice-cold)	[48] [59]
DSP/HBSS	DSP/Tsb	DSP/HBSS(37 C, 10min), DSP/Tsb(37 C, 10min and 5min), 4% PFA/MTSB(37 C, 15min), PBS(rm, 5min), 100mMglycine/PBS (rm, 5min)), PBS(rm, 5min)	[8]
4% PFA/PBS	0.1% saponin+5% serum/PBS	4% PFA/PBS(30min), 100mM glycine/PBS, 0.1% saponin+5% serum/PBS(20min)	[54]
4% PFA/PBS	0.5% NP-40/PBS	4% PFA/PBS(10min), PBS(wash), 0.5% NP-40/PBS(15min)	[46]
4% PFA+320mM sucrose/CB	0.5% TX100/CB	4% PFA+320mM sucrose/CB(20min), CB(wash, x3), 0.5%TX100/CB(10min) TBS-Tx(wash), 2%serum/TBS-Tx(1hour)	[50]
(MeOH, 3.7% FA, acetone)		MeOH(-10 C, 30s), 3.7% FA/PBS (5min), PBS(wash, 15min x2), acetone(-10 C, 5min), PBS(wash)	[60]
(0.5% DOTMAC+1% PFA/PBS(+))		0.5% DOTMAC+1% PFA/PBS(4 C, 5min), 1% PFA/PBS(4 C, 20min), PBS(rm. 5min, x3), 1% BSA/PBS(rm, 60min)	This paper.

MeOH, methanol; EtOH, ethanol; TCA, trichloroacetic acid;, AcOH, acetic acid; FA, formaldehyde; PFA, paraformaldehyde; GA, glutaraldehyde; DOTMAC, dodecyltrimethylammonium chloride
PB, phosphate buffer; PBS, phosphate buffered saline(calcium and magnesium free); PBS(+); PBS containing 1mM $CaCl_2$ and 1mM $MgCl_2$; TX100, Triton X-100; PLP, (2% PFA, 10mM periodate, 75mM lysine, 37.5mM PB, pH7.4);
LP, (2% PFA, 100mM lysine, 50mM PB, pH7.4, rm); BSA, bovine serum albumin; PHEM, (60mM PIPES, 25mM HEPES, 10mM EGTA, 2mM $MgCl_2$, pH6.9); PEM, (100mM PIPES, 5mM EGTA, 2mM $MgCl_2$, pH6.8);
DSP, dithiobis(succinimidylpropionate); Tsb, 0.5% Triton X-100 in MTSB; MTSB, microtubule stabilizing buffer (1mM EGTA, 4% PEG8000, 100 mM PIPES, pH6.9);
MTPB, microtubule-protecting buffer (60mM PIPES, 25mM HEPES, 10mM EGTA, 10mM $MgCl_2$, pH6.9); CB, cytoskeleton buffer (10mM MES, 138mM KCl, 3mM $MgCl_2$, 2mM EGTA, pH6.1);
TBS-Tx, (0.1% Triton X-100, 20mM Tris-HCl, 150mM NaCl, pH7.2).