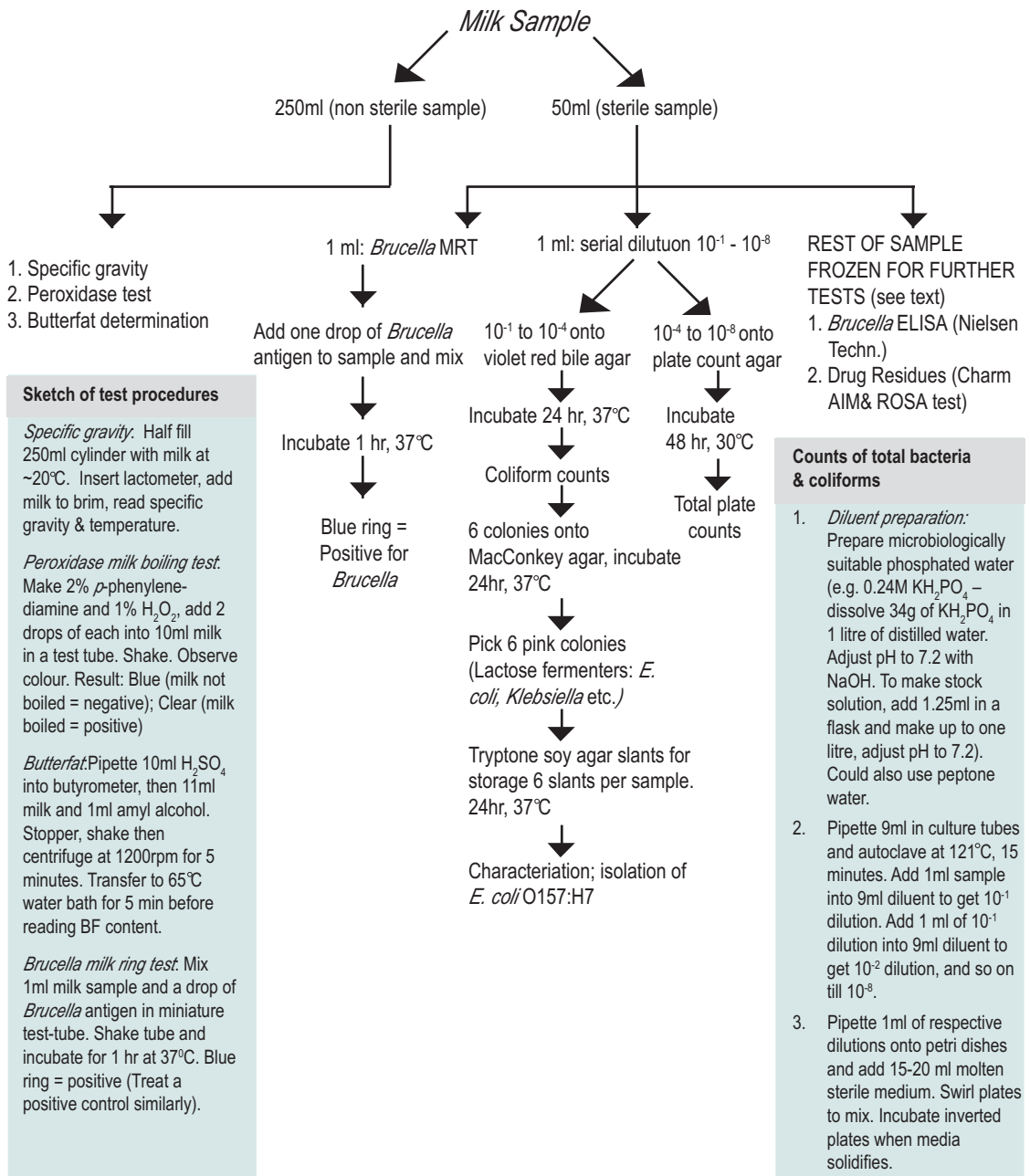


# Annex 1. Flow diagram summarising laboratory analysis



# Annex 2a. Plan of action by the dairy public health committee on the management of milk-borne health risks in Kenya

Issue	Recommendations/ Interventions	Plan of action	Responsibility for implementation & financing <sup>a</sup>	First Step	Remarks
1. Elimination of infections from zoonoses and faecal coliforms in raw milk.	Consumers: Ensure milk is heat treated (boiled or pasteurized) before consumption	Media campaigns through leaflets, billboards etc	<u>KDB</u> , <u>KEBS</u> , <u>MoH</u>	Consult media company on strategy by end 5/02	Build on leaflet and media campaign by SDP
	Raw milk retailers: Boil or pasteurize milk	Education and training of market agents	As in issue No. 4: <u>SDP</u> , <u>MoLFD/SDP</u> , <u>KDB</u>	As in issue No. 4: <u>SDP</u> to finalise field testing and training of trainers by 3/03	
	Influence long-term change in practices	Lobby to include information in school education curriculum	<u>KDB</u> , <u>MOE</u>		
2. Consumption of naturally fermented raw milk as a potential source of zoonoses.	More information needed on survival of zoonoses in fermented milk, fermentation practices by market agents and the extent of sale of raw fermented milk	Conduct further study	<u>KDB</u> , <u>MoLFD/SDP</u> , other research bodies	Commission study by <u>KDB</u> : Letter to request for design of study by end 5/02	This is a critical issue amongst market agents who often sell un-boiled raw fermented milk
	Consumers: Boil raw milk before fermentation (using commercially available methods of souring) and ensure purchased fermented milk has been boiled beforehand	Media campaigns	<u>KDB</u> , <u>KEBS</u> , <u>MOH</u>	As in issue No. 1: Consult media company on strategy by end 5/02	Build on leaflet and media campaign by SDP
	Raw milk retailers: Boil milk before fermentation. Throw away milk that naturally ferments before boiling.	Comply with <u>KDB</u> recommendations for milk fermentation	<u>KDB</u>	Reduce information on fermentation procedures to a leaflet by end 5/02	

<sup>a</sup>Lead institution underlined



Issue	Recommendations/ Interventions	Plan of action	Responsibility for implementation & financing <sup>a</sup>	First Step	Remarks
3. Bulkied raw milk increases the risk of infection with milk-borne zoonoses	Consumers: Pass message on increased level of risk from bulkied milk and emphasize the need for using heat treated milk	Media campaigns	As in issue No. 1: <u>KDB</u> , <u>KEBS</u>	As in issue No. 1: Consult media company on strategy by end 5/02	Build on leaflet and media campaign by SDP
	Raw milk retailers: Should emphasise the need to boil milk before retailing	Training of market agents	As in issue No. 4: <u>MoLFD/SDP</u> , <u>KDB</u>	As in issue No. 4: SDP to finalise field testing and training of trainers by 3/03	Coops to be encouraged to buy kits for testing
	Transfer/extend appropriate tests to separate milk that must go for processing (esp. coops)	Encourage testing of milk for common zoonoses (e.g., brucellosis), Transfer appropriate tests. Education and training.	<u>KDB</u> , <u>KEBS</u> , Coops and other groups that bulk milk	<u>KDB</u> to acquire capacity to conduct random tests by end 8/02	
4 a) Mobile milk traders are not licensed, lack training and therefore do not sell quality milk	Define specific codes for different groups	Specify hygiene codes of practice for different homogenous groups, including appropriate milk handling equipment.	<u>KEBS</u> , <u>KDB</u> , <u>MoLFD</u> , <u>Moh</u> , <u>NGOs</u>	<u>KEBS</u> to circulate current Hygiene Code of Practice to <u>PHC</u> by mid-4/02 and <u>KDB</u> to initiate steps to repackaging Code by end 6/02	Code to be sent to <u>PHC</u> as soon as possible. Small traders play a very important role and cannot be excluded from the licensed milk trade
	Train and license raw milk traders	Train traders on milk hygiene before licensing	<u>MoLFD/SDP</u> , <u>KDB</u>	As in issue No. 1: SDP to finalise field testing and training of trainers by 3/03	
4 b) Raw milk sales not allowed in urban areas	Take steps to allow raw milk sales everywhere	Verify interpretation of existing Act Cap 336 to see if raw milk sale is "banned"	<u>Dairy PHC</u> , <u>Members</u>	<u>KDB</u> to circulate 1972 and 1984 revisions of Act by mid-4/02. <u>PHC</u> to discuss Act and its interpretation by end 6/02	Repackaging of Code to be initiated immediately after its launching

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Issue	Recommendations/ Interventions	Plan of action	Responsibility for implementation & financing <sup>a</sup>	First Step	Remarks
5. Lack of awareness of existing standards and that they can be revised at any time	Create awareness amongst stakeholders	More media campaigns in addition to current radio programmes. More education & training of stakeholders	<u>KEBS</u> , Stakeholders	KEBS to circulate existing milk hygiene standards and process to follow for revisions by end-4/02	KEBS rep noted that any stakeholder can initiate the process of revising standards
	6. Low quality of milk in the market	Mount training and awareness campaigns on the need to observe good hygiene from farm-to-table Encourage quality control by promoting testing at collection points and self certification	<u>MoLFD/SDP</u> , KDB, KDPA  <u>KDB</u> , KDPA, NGOs, Coops, Small traders associations	MoLFD to review current leaflets and devise mechanisms for their further distribution by end-7/02 KDB to hold meeting with KDPA by end-6/ 02	Build on milk hygiene leaflet and media campaign by SDP Borrow leaf from elsewhere
7 a) High prevalence of antibiotic residues in milk	Testing to be made mandatory along the milk market chain Institute penalties for offenders plus give incentives for improvement	Training of farmers on dangers of drug residues. KDB to meet with processors and agro-vets to begin to pass message Enforce existing Act	<u>KDB</u>	KDB to hold meeting with KDPA by end-6/ 02 KDB to initiate random checks by end-9/02	Learn 'how' from other countries
	Use KEBS Act disallowing drugs residues in foods or enact additional legislation if required	Enforce existing Act	<u>KDB</u> , KEBS	KDB to use Act or take steps to enact additional legislation if necessary by 3/03	Aim for zero tolerance for drug residues in milk.
	Incorporate issue in training of milk market agents More info required on farm-level practices that result in residues in milk	Train traders on adverse effects of drug residues and to pass same message to farmers Conduct farm-level study	<u>MoLFD/SDP</u> , KDB  <u>KDB</u> , MoLFD/SDP, other research bodies	SDP to finalise field testing by 3/03  KDB to commission study. First step is to request SDP to design study by mid 5/02	Approach KDPA to fund study. Explore opportunities for collaboration with other interested parties

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Issue	Recommendations/ Interventions	Plan of action	Responsibility for implementation & financing <sup>a</sup>	First Step	Remarks
7 b) Presence of hydrogen peroxide and other chemical residues in milk.	Create more awareness on adverse effects amongst traders Encourage testing along the milk market chain	Do a brief on adverse health effects of H <sub>2</sub> O <sub>2</sub> residues in milk Conduct tests	<u>KDB</u>	KDB to hold meeting with KDPA by end-6/02 KDB to initiate random checks by end-6/02	Brief on adverse effects of H <sub>2</sub> O <sub>2</sub> to be supplied by MoLFD (Mary) by 6/02
8. Rapid bacterial degradation of milk.	Train farmers to cool milk using practical technologies	Document and encourage use of practical technologies for cooling  Test use of LPS	<u>KDB</u>  <u>MoLFD/SDP</u> , KDB, KEBS	KDB to describe alternative technologies by end 6/02  Testing of LPS: SDP to give report by 3/03	  There is need for Kenya to be represented at relevant Codex meetings such as the one that will consider changes in guidelines governing the use of LPS

<sup>a</sup>Lead institution underlined



## Annex 2b: Members of the dairy public health committee

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